PB-245 836

A STUDY OF EMISSIONS FROM 1967-1974 LIGHT-DUTY VEHICLES IN DENVER, HOUSTON, AND DETROIT

D. R. Liljedahl, et al

Automative Testing Laboratories, Incorporated

Prepared for:

Environmental Protection Agency

October 1974

DISTRIBUTED BY:

NTIS

National Technical Information Service
U. S. DEPARTMENT OF COMMERCE

301168

PB 245 836

EPA-460/3-74-015
OCTOBER 1974

A STUDY OF EMISSIONS FROM 1967-1974 LIGHT-DUTY VEHICLES IN DENVER, HOUSTON, AND DETROIT

Reproduced by
NATIONAL TECHNICAL
INFORMATION SERVICE
US Department of Commerce
Springfield, VA. 22151

U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Air and Waste Management
Office of Mobile Source Air Pollution Control
Certification and Surveillance Division
Ann Arbor, Michigan 48105

TECHNICAL REPORT DATA

(Please read Instructions on the reverse before completing)

1. REPORT NO.
EPA-460/3-74-015

2.

3. RECIPIENT'S ACCESSION NO.

4. TITLE AND SUBTITLE
A Study of Emissions from 1967-1974 Light-Duty Vehicles in Denver, Houston, and Detroit

5. REPORT DATE
October 1974

6. PERFORMING ORGANIZATION CODE

7. AUTHOR(S)
D. R. Liljedahl and J. L. Terry

8. PERFORMING ORGANIZATION REPORT NO.

9. PERFORMING ORGANIZATION NAME AND ADDRESS
Automotive Testing Laboratories, Inc.
19900 E. Colfax Ave.
Aurora, Colorado 80011

10. PROGRAM ELEMENT NO.

11. CONTRACT/GRANT NO.
68-03-0388

12. SPONSORING AGENCY NAME AND ADDRESS
U.S. Environmental Protection Agency
Office of Air and Waste Management
Office of Mobile Source Air Pollution Control
Ann Arbor, Michigan 48105

13. TYPE OF REPORT AND PERIOD COVERED

14. SPONSORING AGENCY CODE

15. SUPPLEMENTARY NOTES

16. ABSTRACT

A laboratory emissions study was conducted on a sample of 1967-1974 model-year vehicles operating in Denver, Houston and Detroit. Emissions from 540 vehicles, 180 from each city, were investigated. Sound level tests were also performed on 85 vehicles from the San Antonio area.

Exhaust emission test were performed on each vehicle in the as-received condition using the 1975 Federal Test Procedure. Evaporative emission tests were performed on 20 1973 model-year vehicles in the Denver area using the canister collection procedure of the Federal Register and the SHED testing techniques of SAE J 171. A variety of additional exhaust emission tests were also performed. Modal emissions data were developed from 75 of the 1972, 1973 and 1974 model-year vehicles in each site using Surveillance Driving Sequence and steady state testing procedures. Emissions from air conditioned vehicles were investigated in Houston and Detroit using a sequence and steady state testing procedures. Emissions from air conditioned vehicles were investigated in Houston and Detroit using a sequence of 4 modified FTP hot start tests. Emissions from loaded vehicles and vehicles towing trailers were also investigated using Surveillance Driving Sequence and steady state testing procedures. Sound level tests were performed at the wide open throttle test condition in accordance with the SAE J986a procedure and at the 5 operating conditions of the EPA Use Cycle Modes. Additional tests were conducted for use in sound level contour development.

17. KEY WORDS AND DOCUMENT ANALYSIS

a. DESCRIPTORS	b. IDENTIFIERS/OPEN ENDED TERMS	c. COSATI Field/Group

PRICES SUBJECT TO CHANGE

18. DISTRIBUTION STATEMENT
Release Unlimited

19. SECURITY CLASS *(This Report)*
UNCLASSIFIED

20. SECURITY CLASS *(This page)*
UNCLASSIFIED

21. NO. OF PAGES
436

22. PRICE
11.25-2.25

EPA Form 2220-1 (9-73)

EPA-460/3-74-015

A STUDY OF EMISSIONS FROM 1967-1974 LIGHT-DUTY VEHICLES IN DENVER, HOUSTON, AND DETROIT

Prepared by

D.R. Liljedahl and J.L. Terry

Automotive Testing Laboratories, Inc.
19900 E. Colfax Ave.
Aurora, Colorado 80011

Contract No. 68-03-0388

EPA Project Officer: John T. White III

Prepared for

U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Air and Waste Management
Office of Mobile Source Air Pollution Control
Certification and Surveillance Division
Ann Arbor, Michigan 48105

October 1974

This report is issued by the Environmental Protection Agency to report technical data of interest to a limited number of readers. Copies are available free of charge to Federal employees, current contractors and grantees, and nonprofit organizations - as supplies permit - from the Air Pollution Technical Information Center, Environmental Protection Agency, Research Triangle Park, North Carolina 27711; or, for a fee, from the National Technical Information Service, 5285 Port Royal Road, Springfield, Virginia 22151.

This report was furnished to the Environmental Protection Agency by Automotive Testing Laboratories, Inc., Aurora, Colorado, in fulfillment of Contract No. 68-03-0388. The contents of this report are reproduced herein as received from Automotive Testing Laboratories, Inc. The opinions, findings, and conclusions expressed are those of the author and not necessarily those of the Environmental Protection Agency. Mention of company or product names is not to be considered as an endorsement by the Environmental Protection Agency.

Publication No. EPA-460/3-74-015

ABSTRACT

A laboratory emissions study was conducted on a sample of 1967-1974 model-year vehicles operating in Denver, Houston and Detroit. Emissions from five-hundred and forty vehicles, one hundred and eighty from each city, were investigated. Sound level tests were also performed on eighty-five vehicles from the San Antonio area.

Exhaust emission tests were performed on each vehicle in the as-received condition using the 1975 Federal Test Procedure. Evaporative emission tests were performed on twenty 1973 model-year vehicles in the Denver area using the canister collection procedure of the Federal Register and the SHED testing techniques of SAE J 171. A variety of additional exhaust emission tests were also performed. Modal emissions data were developed from seventy-five of the 1972, 1973 and 1974 model-year vehicles in each site using Surveillance Driving Sequence and steady state testing procedures. Emissions from air conditioned vehicles were investigated in Houston and Detroit using a sequence of four modified FTP hot start tests. Emissions from loaded vehicles and vehicles towing trailers were also investigated using Surveillance Driving Sequence and steady state testing procedures. Sound level tests were performed at the wide open throttle test condition in accordance with the SAE J986a procedure and at the five operating conditions of the EPA Use Cycle Modes. Additional tests were conducted for use in sound level contour development.

ACKNOWLEDGEMENTS

The support of the Surveillance Branch of the Environmental Protection Agency, Division of Certification and Surveillance is acknowledged with a special thanks to Mr. John T. White III, EPA Project Officer and staff for their professional guidance and helpful assistance.

The assistance of Dollar-A-Day Rental Car Systems is acknowledged for its service in providing courtesy vehicles in Denver, Houston, Detroit and San Antonio with a special thanks to June Samuels and staff of the Denver office for their prompt and courteous service.

The mailing firm of Hibbert/Laman of Denver is acknowledged for the design and preparation of mailing materials in accordance with the stringent operating schedules. A sincere thank you is extended to Mr. Jim Kramer.

A special thanks is extended to Mr. Lee Cunningham for directing the sound level testing effort in the San Antonio area.

Table of Contents

Page No.

1. INTRODUCTION 1
2. TECHNICAL DISCUSSION 3
  2.1 Program Objectives 3
  2.2 Program Design 3
  2.3 Test Vehicle Procurement 6
    2.3.1 Test Vehicle Selection 7
    2.3.2 Incentives 12
    2.3.3 Test Vehicle Handling 12
  2.4 Facilities and Equipment 13
    2.4.1 Test Locations 13
    2.4.2 Constant Volume Samplers 14
    2.4.3 Emission-Analysis Consoles 14
    2.4.4 Evaporative Emissions Equipment 15
    2.4.5 Laboratory Standard Calibration Gases 17
    2.4.6 Chassis Dynamometers 17
    2.4.7 Equipment for Special Additional Tasks 18
      2.4.7.1 Special Equipment for Modal Emissions 18
      2.4.7.2 Special Equipment for Simulation of Loaded Vehicles and Vehicles Towing Trailers 19
      2.4.7.3 Special Equipment for Sound Level Testing 20
    2.4.8 Miscellaneous Equipment 20
  2.5 Equipment Qualification, Calibration and Cross-Check 21
    2.5.1 Constant Volume Sampler 21
    2.5.2 Emissions Analyzers Console 22
    2.5.3 Chassis Dynamometer 22
    2.5.4 Evaporative Emissions Equipment 23
    2.5.5 Equipment for Special Additional Tasks 23
  2.6 Test Procedures 24
    2.6.1 Vehicle Preparation 27
      2.6.1.1 Preparation of Vehicles Not Subjected to Evaporation Emissions Testing 27
      2.6.1.2 Preparation of Vehicles Subjected to Evaporative Emissions Testing 28
    2.6.2 Equipment Preparation 29
    2.6.3 Federal Exhaust Emission Test Procedure 29
    2.6.4 Modal Exhaust Emission Test Procedures 30
    2.6.5 Evaporative Emission Test Procedure 31
      2.6.5.1 SHED Procedure 31
      2.6.5.2 Canister Procedure 32
    2.6.6 Special Additional Tests 32
      2.6.6.1 Test Procedures for Loaded Vehicles and Vehicles Towing Trailers 32
      2.6.6.2 Test Procedures for Air Conditioned Vehicle Emission Factors Development 35
      2.6.6.3 Test Procedures for Fuel Economy 36
      2.6.6.4 Test Procedures for Sound Level 36
      2.6.6.5 After Test Procedures 39

2.6.7 Daily Test Schedule 41
2.7 Data Handling 41
2.7.1 Data Collection 41
2.7.2 Data Processing 42
2.7.3 Calculation of Results 42
2.7.3.1 Exhaust Emissions (Federal Test Procedure) 42
2.7.3.2 Modal Emissions 43
2.7.3.3 Fuel Economy 43
2.7.3.4 Evaporative Emissions 43
2.7.3.5 Air Conditioned Vehicle Emissions 43
2.7.3.6 Emissions from Loaded Vehicles and Vehicles Towing Trailers 44
2.7.3.7 Sound Level Tests 44
3. TEST RESULTS 45
3.1 Discussion of Exhaust Emission and Fuel Economy Test Results 45
3.1.1 Federal Test Procedure and Highway Fuel Economy Test Exhaust Emissions and Fuel Economy 45
3.1.1.1 Vehicles Meeting Federal Emissions Standards 50
3.1.1.2 1972 Vehicles Meeting 1972 Federal Standards 57
3.1.1.3 1973 Vehicle Meeting 1973 Federal Standards 61
3.1.1.4 1974 Vehicles Meeting 1974 Federal Standards 65
3.1.2 Modal Emissions 69
3.2 Discussion of Evaporative Emission Test Results 79
3.3 Discussion of Federal Test Procedure Replicate Testing 81
3.4 Discussion of Federal Air Conditioned Vehicle Emission Test Results 83
3.5 Discussion of Emissions from Loaded Vehicles Towing Trailers 85
3.6 Discussion of Sound Level Test Results 94
4. APPENDICES 97

Appendices page no.

Appendix A Listing of Vehicle and Test Parameters 98
in Denver 99
in Houston 102
in Detroit 105
Appendix B Listing of Test Vehicle Use and Maintenance Data 108
in Denver 109
in Houston 112
in Detroit 115
Appendix C Listing of Federal Test Procedure Results on Individual Vehicles 118
in Denver 120
in Houston 170
in Detroit 215

Appendix D Listing of Modal Results on Individual Vehicles 260
in Denver 262
in Houston 287
in Detroit 312

Appendix E Listing of Evaporative Emission Test Results on Individual Vehicles in Denver 337

Appendix F Listing of Individual Test Results on Air-Conditioned Vehicles 339
in Houston 340
in Detroit 350

Appendix G Listing of Loaded Vehicle Test Results on Individual Vehicles in Detroit 360

Appendix H Listing of Individual Sound Level Tests 405

Appendix I Data Sheets from Idle Contour Sound Level Measurements 408

Appendix J Test Fuel Inspection Reports 429

List of Tables

Table No.	Title	Page No.
1	Summary of Vehicle Makes	8
2	Summary of Test Vehicle Characteristics by Model Year	9
3	Exhaust Emission Test Results vs. Model Year	47
4	Vehicles Meeting Federal Standards	51
5	1972 Vehicles Meeting 1972 Federal Standards	58
6	1973 Vehicles Meeting 1973 Federal Standards	62
7	1974 Vehicles Meeting 1974 Federal Standards	66
8	Summary of Modal Emission Results on Thirty 1972 Model-Year Vehicles	70
9	Summary of Modal Emissions on Thirty-Five 1973 Model-Year Vehicles	73
10	Summary of Modal Emissions on Ten 1974 Model-Year Vehicles	76
11	Summary of Evaporative Emission Test Results on Twenty 1973 Model-Year Vehicles	80
12	Summary of Results of Replicate Testing on Twenty 1973 Model-Year Vehicles	82
13	Summary of Air Conditioned Vehicle Tests vs. Model Year	84
14	Summary of Loaded Vehicle Tests on Six 1967 Model-Year Vehicles	86
15	Summary of Sound Level Tests by Model Year	95

1. INTRODUCTION

The United States Environmental Protection Agency (EPA), through authority provided by the Clean Air Act is responsible for the prevention and control of air pollution. One of the responsibilities of the EPA as provided by the act is the design, conduct and promotion of surveys and studies of the sources and causes of air pollution. The Surveillance Branch of the EPA, Certification and Surveillance Division has the responsibility of obtaining emission data on in-use motor vehicles. These data are utilized within EPA by the National Air Data Branch and the Office of Transportation Land Use Planning for their use in calculating and projecting nationwide and metropolitan area motor vehicle emissions for light-duty vehicles. The emission factors generated are also used in developing transportation control procedures and emergency episode considerations. Outside EPA, these factors are used by various state and local agencies in their air pollution control plans.

The FY 71 Program, EPA's first major surveillance program using the constant volume sampler (CVS) techniques, measured exhaust and evaporative emissions from 1957-1971 light-duty vehicles. Similar work on 1966-1972 model-year vehicles was completed in the FY 72 light-duty vehicle study program. The FY 73 program, the subject of this report, was initiated to study emissions from 1967-1974 light duty vehicles.

In carrying out its FY 73 program, the EPA contracted with Automotive Testing Laboratories, Inc., (ATL) to provide emission data from vehicles operating in three U.S. metropolitan areas. The three cities study was part of a larger study effort to develop data from vehicles operating in six metropolitan areas. This report describes the conduct of ATL's part of the study program and presents the results of testing in Denver, Houston and Detroit. Sound level data, collected on a sample of light-duty vehicles in support of the EPA's Office of Noise Abatement and Control are also presented. These tests were performed in the San Antonio area.

2. TECHNICAL DISCUSSION

2.1 PROGRAM OBJECTIVES

The primary objective of the program is to provide light-duty vehicle emission data to be used to establish and predict vehicle emissions on a nationwide and metropolitan area basis. These data are to be utilized to calculate average emission factors from which emission source inventories and emergency episode pollution abatement procedures may be developed.

2.2 PROGRAM DESIGN

The Environmental Protection Agency specified standard mass emission tests be performed on a sampling of 1967 through 1974 model-year vehicles operating in six metropolitan areas; Denver, Houston, Detroit, Los Angeles, Newark and St. Louis. The EPA also specified evaporative emission tests be performed on certain 1973 model-year vehicles in the Denver and Los Angeles samples.

Other tests designed to satisfy certain study objectives were scheduled for other sites. Air conditioned vehicle emission data for factors development were generated using Houston and Detroit area vehicles. Emission and fuel economy data were developed from Denver and Detroit area vehicles using the EPA recently developed Highway Fuel Economy Test. Modal mass emissions data for factors development were generated from vehicles operating in all sites. The same modal procedures were utilized for modal mass emission factors development for loaded vehicles and vehicles towing trailers using a sample of Detroit area vehicles.

Sound level data were also developed from an eighty-five (85) vehicle sample of the 1967-1974 model-year vintage.

In view of program objectives, the EPA specified the sample of 180 vehicles to be tested at each site with certain allowances for substitute vehicles. Certain limitations on testing site locations and vehicle procurement sources were also stipulated. With regards to the ATL effort (Denver, Houston and Detroit), a standard sampling and procurement strategy was utilized and incentives to test participants were offered and provided at EPA's direction.

The EPA also stipulated the types of tests to be performed. Exhaust emission tests by the 1975 test procedure were specified for all vehicles. Evaporative emission tests by the Sealed Housing for Evaporative Determination (SHED) technique and by the canister method as prescribed in the Federal Register for certification testing were specified. Guidelines on the composition of the evaporative emission test sample were provided.

Further direction was provided by the EPA with regards to the additional testing tasks assigned to ATL. Modal emissions measurements were required from the seventy-five (75) 1972, 1973 and 1974 model-year vehicles tested at each site. To achieve the objectives of the task, continuous dilute constant volume sampler emissions were measured and recorded during vehicle acceleration and deceleration over the 1,954 second Surveillance Driving Sequence and at seven (7) steady state vehicle operating modes.

The air conditioned vehicle emission factors data were developed from twenty (20) vehicles each in Houston and Detroit. These data were developed through vehicle operation by the Federal Register procedures except that the vehicle was operated over the driving schedule from a hot start. The testing sequence, comprised of four hot start tests, was conducted solely on vehicles equipped with factory installed air conditioning systems. Testing was such as to allow calculation of emission factors for vehicles with the air conditioning system operating.

The EPA specified the Surveillance Driving Sequence vehicle operation and modal mass sampling techniques be utilized to develop data on loaded vehicles and vehicles towing trailers. Tests were performed on 42 Detroit area vehicles at three load conditions. The first was at the inertia weight and road load settings of the Federal Register. The second was at a higher inertia weight to simulate the addition of passengers and baggage. The third was at an even higher inertia weight and a higher road load setting to simulate the addition of a towed vehicle. A prerequisite to this phase of the study was the determination of suitable road load horsepower settings. This was accomplished by utilizing the procedures of the Federal Register for determining actual road load power settings. Specific procedures and results are presented in paragraph 2.6.5.1 of this report.

The development of fuel economy data was one of the study requirements. Fuel economy data were developed in conjunction with the standard emission tests. The EPA also required additional fuel economy data be provided from all Denver and Detroit area vehicles. The testing procedure utilized to develop these data was the EPA's recently developed Highway Fuel Economy Test. In all cases, the carbon balance technique was used in the calculation of fuel economy.

With final regards to testing procedures, the EPA specified sound level tests be performed on eighty-five (85) 1967-1974 model-year vehicles. The SAE Standard J 986a "Sound Level for Passenger Cars and Light Trucks" was specified. In addition, all vehicles were tested at constant speed drive-by conditions, at idle and at one acceleration rate from a standing start. Ten (10) vehicles were further tested at two engine idling conditions to develop sound level contour data.

Other design considerations were comprised of specified equipment and calibration requirements, test fuel requirements, and data treatment and reporting requirements.

2.3 TEST VEHICLE PROCUREMENT

The EPA specified tests be performed on a sample of 1967-1974 model-year vehicles at each site. The procurement of vehicles for the required sample was based on vehicle miles traveled (VMT) by age of vehicle as reported by the National Academy of Science. Within each model-year the sample was based on sales information. The sample was further delineated by make, engine size (displacement), transmission type and carburetion type including a sampling of fuel injected engines. In addition, certain Houston and Detroit area vehicles were required to be equipped with air-conditioning systems for the air conditioned vehicle emission factors segment of the study.

The EPA also stipulated candidate vehicles be procured from the subject metropolitan areas. For study purposes, a metropolitan area was defined as being not more than 10 miles outside the boundaries of the city specified. Other stipulations included the following minimum requirements:

100% fit to the make and model-year specified

90% fit to the make, model-year and engine displacement specified.

75% fit to the make, model-year, engine displacement, transmission type and carburetor type specified.

In addition, for any one model-year, the use of rental vehicles was limited to ten percent of the vehicles tested at each location. The number of vehicles procured from members of civic, fraternal or religious organizations was also limited to 50% of vehicles tested at each site and groups of test vehicles from automotively oriented organizations were prohibited. In these respects, deviations from sample specifications were either equal to or less than the maximum allowed. A delineation of test sample composition by model-year and make as applied to each site is shown in Table 1. A further delineation of test sample composition by model-year versus vehicle inertia weights, engine displacement and number of engine cylinders is shown for each site in Table 2.

2.3.1 Test Vehicle Selection

The test sample was procured in accordance with a recognized standard procurement strategy. A list of vehicle owners was developed for each site. Owners were selected from computer files by an nth name selection process. Introductory materials, including a letter from EPA and a letter from ATL, were mailed to prospective participants coincident to preliminary equipment set-up and calibration activities. Mailed materials also contained a post-paid data reply card on which certain vehicle identification data (engine size, transmission, carburetor, vehicle I.D. no., etc.) were requested. This information was subsequently utilized to select and schedule test vehicles in accordance with requirements of the EPA listed test sample.

The mailing process was directed toward about 5,000 registered vehicles in each of the three test sites. Affirmative replies, which were on the order of ten percent of initial mailings, produced about eighty-five to ninety percent of the desired sample. The remainder of the sample was procured as a result of several strategies. These included a direct request for specific vehicles via the news media, automobile repair organization service files and used car lots.

2.3.2 Incentives

To improve the level of participation by vehicle owners, incentives were offered. These incentives, consisting of a $25.00 U.S. Savings Bond

Table 1

Summary of Vehicle Makes by Model-Year

Each Site

	1967	1968	1969	1970	1971	1972	1973	1974	Total
AMC	1	1	1	0	1	0	1	0	5
Buick	1	1	1	1	2	2	2	1	11
Cadillac	1	1	0	0	1	0	1	0	4
Capri	0	0	0	0	0	0	1	0	1
Chevrolet	4	5	6	6	6	7	8	2	44
Chrysler	1	0	1	0	1	0	1	0	4
Datsun	0	0	0	0	1	1	1	0	3
Dodge	1	1	1	1	1	2	2	1	10
Ford	3	4	5	5	5	6	7	2	37
Lincoln	0	0	0	0	0	1	0	0	1
Mazda	0	0	0	0	0	0	1	0	1
Mercury	1	1	1	1	1	1	1	0	7
Oldsmobile	1	1	1	2	2	2	2	1	12
Opel	0	0	0	0	0	1	0	0	1
Plymouth	1	1	1	2	2	2	2	1	12
Pontiac	1	1	2	2	2	2	2	1	13
Toyota	0	0	0	1	1	1	1	0	4
Volkswagen	1	1	1	1	1	2	2	1	10
Totals	17	18	21	22	27	30	35	10	180

TABLE 2

SUMMARY OF TEST VEHICLE CHARACTERISTICS
BY MODEL YEAR

DENVER

	1967	1968	1969	1970	1971	1972	1973	1974	TOTALS
INERTIA WEIGHTS (LBS)									
1750	0	0	0	0	0	0	0	0	0
2000	1	1	0	1	3	2	1	1	10
2250	0	0	1	0	1	3	1	0	6
2500	0	0	0	1	1	2	3	0	7
2750	0	0	0	1	1	0	3	0	5
3000	3	4	3	1	1	4	4	1	21
3500	5	6	6	3	7	5	4	3	39
4000	6	4	6	9	6	3	12	2	48
4500	1	2	5	4	6	8	4	2	32
5000	1	1	0	2	1	3	2	1	11
5500	0	0	0	0	0	0	1	0	1
ENGINE DISPLACEMENT (CUBIC INCHES)									
UNDER 251	4	4	3	4	7	9	12	1	44
251 - 350	7	7	6	4	5	4	5	3	41
351 - 399	4	4	9	9	7	9	9	3	54
OVER 399	2	3	3	5	8	8	9	3	41
NUMBER OF CYLINDERS									
4	1	1	1	2	5	7	6	1	24
6	3	3	2	2	2	2	5	0	19
8	13	14	18	18	20	21	23	9	136
ROTARY	0	0	0	0	0	0	1	0	1
TOTALS	17	18	21	22	27	30	35	10	180

TABLE 2

SUMMARY OF TEST VEHICLE CHARACTERISTICS BY MODEL YEAR

HOUSTON

	1967	1968	1969	1970	1971	1972	1973	1974	TOTALS
INERTIA WEIGHTS (LBS)									
1750	0	0	0	0	0	0	0	0	0
2000	1	1	0	1	2	0	0	0	5
2250	0	0	1	0	2	3	1	1	8
2500	0	0	0	1	1	5	4	0	11
2750	0	0	0	1	1	0	3	0	5
3000	3	2	5	1	1	2	6	0	20
3500	4	6	4	4	8	4	3	2	35
4000	6	3	4	8	6	6	8	3	44
4500	2	5	5	6	4	7	6	4	39
5000	1	1	2	0	2	3	3	0	12
5500	0	0	0	0	0	0	1	0	1
ENGINE DISPLACEMENT (CUBIC INCHES)									
UNDER 251	4	4	3	4	7	9	11	1	43
251 - 350	7	6	6	4	5	4	6	3	41
351 - 399	3	5	10	9	7	9	9	4	56
OVER 399	3	3	2	5	8	8	9	2	40
NUMBER OF CYLINDERS									
4	1	1	1	2	5	8	8	1	27
6	3	3	2	2	2	1	3	0	16
8	13	14	18	18	20	21	23	9	136
ROTARY	0	0	0	0	0	0	1	0	1
TOTALS	17	18	21	22	27	30	35	10	180

TABLE 2

SUMMARY OF TEST VEHICLE CHARACTERISTICS
BY MODEL YEAR

DETROIT

	1967	1968	1969	1970	1971	1972	1973	1974	TOTALS
INERTIA WEIGHTS (LBS)									
1750	0	0	0	0	0	0	0	0	0
2000	1	1	1	1	2	0	1	0	7
2250	0	0	0	0	2	3	0	1	6
2500	0	0	0	1	1	4	3	0	9
2750	0	0	0	1	1	0	4	0	6
3000	2	2	2	1	1	3	3	0	14
3500	2	8	7	5	7	3	6	1	39
4000	11	4	7	9	5	4	7	4	51
4500	0	2	4	2	6	11	6	3	34
5000	1	1	0	2	2	1	4	1	12
5500	0	0	0	0	0	1	1	0	2
ENGINE DISPLACEMENT (CUBIC INCHES)									
UNDER 251	4	4	3	4	7	9	11	1	43
251 - 330	6	8	5	4	5	4	5	3	40
331 - 399	5	3	11	9	7	9	10	3	57
OVER 399	2	3	2	5	8	8	9	3	40
NUMBER OF CYLINDERS									
4	1	1	1	2	5	7	6	1	24
6	3	3	2	2	2	2	5	0	19
8	13	14	18	18	20	21	23	9	136
ROTARY	0	0	0	0	0	0	1	0	1
TOTALS	17	18	21	22	27	30	35	10	180

(actual value, $18.75), the use of late model loan car during the time the test car was at the laboratory and fuel for the loan car, were outlined and offered in the introductory material. In general, the incentives as described were ultimately provided to each participant. In a few cases, however, the owner requested an equivalent amount of cash in lieu of the savings bond. In other cases, incentives in amounts up to $50.00 were provided. Situations where cash incentives were provided, however, were limited to a few isolated circumstances involving vehicles which were otherwise difficult to locate.

2.3.3 Test Vehicle Handling

A file containing the owner cards was established and utilized to schedule vehicles for testing. Owners were contacted by telephone at the number listed on the reply card. At this time, information submitted on the data card was confirmed and incomplete information was obtained. Vehicles which met with sample requirements, or approved substitute vehicles, were then scheduled for testing.

Upon delivery at the test site, each vehicle was initially inspected to confirm compliance with sample requirements. In a few cases, vehicles were rejected at this point because of improper engine or carburetor identification by the owners. This occured one or two times in each site. In other situtations, vehicles were rejected for exhaust system leakage or safety reasons. In each of Denver and Houston, less than three vehicles were in this category while six Detroit area vehicles were rejected because of leaks in the exhaust system. After preliminary inspections indicated a vehicle to be acceptable, loan vehicle agreement forms were completed, an EPA designed questionnaire on vehicle use and maintenance was administered and a tentative test vehicle pick-up time was established. The vehicle was then moved to a work area where pre-test operations were to be performed.

2.4 FACILITIES AND EQUIPMENT

2.4.1 Test Locations

Automotive Testing Laboratories, Inc. operates a permanent facility in the Denver metropolitan area. Laboratory work for the Denver area was performed in this facility. Two additional facilities, established on a temporary basis, were installed to perform testing in the Houston and Detroit areas. The location of each facility and the elevation above sea-level are as listed below:

Denver 19900 East Colfax Avenue
Aurora, Colorado 80011
5490 feet

Houston 1100 Bingle Road, Suite 135
Houston, Texas 77055
60 feet

Detroit 1307 Allen Drive, Suite A.
Troy, Michigan 48084
600 feet

The Denver facility, situated about six miles from the eastern boundary of the Denver city limits, contains about 10,000 square feet of laboratory, shop and office area. The Houston facility, situated in the northwest part of Houston, contained about 7,200 square feet of office and laboratory area. The Detroit facility was situated about 7 miles north of the Detroit city limits and also contained about 7,200 square feet of office and laboratory area.

2.4.2 Constant Volume Samplers

For the most part, one constant volume sampler (CVS) was utilized in the course of the study. Another CVS was used in the Denver phase of the study, primarily to perform basic and modal exhaust emission tests associated with the twenty vehicles also subjected to evaporative emission testing.

The CVS units were designed and constructed by Automotive Environmental Systems, Inc. (AESI) of Westminister, California. The units are of similar design with nominal flow rates of 325 cubic feet of air per minute flow capacity. Each unit incorporates a gas to water heat exchanger and otherwise conforms to the requirements of 37 Federal Register 221 (section 85.073-20).

2.4.3 Emission-Analysis Consoles

Again, a single emission analysis console was used for the major portion of the program. A second console was used in conjunction with the performance of exhaust/evaporative emission testing of twenty vehicles in Denver. The consoles are similar in operation and contain the following major components:

Beckman Model 315 A NDIR CO analyzers with stacked sample cell arrangement, six range capabilities and CO_2 and water vapor interference filters.

Beckman Model 315 A and 315 B CO_2 analyzers with three range capabilities.

Beckman Model 400 Hydrocarbon Flame Ionization Detector with four range capabilities.

Thermo-Electron Model 10A Chemiluminescent NO and NO_x analyzer equipped with a thermal converter and seven range capabilities.

Texas Instruments 10 inch dual or triple channel potentiometric strip chart recorders.

Analytical consoles were designed and constructed by ATL in accordance with the Federal Register as applied to the present exhaust emission testing procedures. Modifications to the sample flow system for removing CO_2 and water vapor from the CO sample stream were not provided, however, in view of the relatively high emission levels expected to be encountered. These modifications will be necessary when testing vehicles designed to meet 1975 Federal Standards.

2.4.4 Evaporative Emissions Equipment

Evaporative hydrocarbon losses were measured by both the Sealed Housing for Evaporative Determination (SHED) technique of SAE J171 and by the charcoal trap procedure as outlined in the Federal Register. Equipment common to both techniques include an electrical heating blanket for applying heat to the vehicle fuel tank and subsequently to tank fuel, a powerstat to regulate blanket heat output, a multi-point temperature recorder and a fuel conditioning cart. The 20 by 30 inch heating blanket, rated at 1500 watts, attaches to the fuel tank by means of flexible straps affixed to each corner of the blanket. The powerstat provides variable voltage for control of blanket heat output. The temperature recorder, a Texas Instrument Multi-Riter, is capable of discontinuous recording from as many as twenty-four sources in a variety of input and print selection options. For study purposes, iron-constantan thermocouples were utilized to record soak area, SHED interior and vehicle tank fuel temperatures at a 2.0 second per point print rate. The effective chart paper width of ten inches was utilized to provide a temperature recording range from 0 to 400 degrees Fahrenheit. In this configuration, temperature changes of one degree Fahrenheit are easily resolved. The fuel conditioning cart, of ATL design and construction, is equipped with a waste fuel tank and an insulated fuel tank. A gear-type pump and valving are provided for multi-directional transfer of fuel. The cart is also equipped with a fuel heating and cooling circuit. Cooling capacity is sufficient to maintain twenty or less gallons of gasoline at temperatures below 50 degrees Fahrenheit under normal laboratory ambient temperature conditions. Fuel temperatures are maintained by means of a Honeywell temperature sensor and controller.

A vehicle enclosure and a hydrocarbon analyzer were utilized to perform SHED tests in conjunction with the equipment listed above. The enclosure is constructed of aluminum floor, side, rear and top panels. Wall and ceiling openings, provided to permit the entrance of light and unobstructed views of the enclosure interior, are covered with Dupont Tedlar. Hinged doors are constructed of square aluminum tubing and Tedlar. Door latches are provided which maintain the enclosure at a relatively air tight condition. An internal blower of nominal 100 cubic feet of air per minute flow capacity is provided to mix the atmosphere of the chamber. Sealed thermocouple connectors and a sample port are also provided. A Beckman Model 400 Hydrocarbon Flame Ionization Detector was used to monitor enclosure hydrocarbon levels during evaporative emission test runs.

Evaporative hydrocarbon emission tests by the procedures of the Federal Register were performed using charcoal traps and an assortment of hardware used in conjunction with trap hook-up. A variety of exhaust pipe and carburetor air horn plugs were also utilized. Charcoal traps are of nominal 150 grams charcoal capacity.

2.4.5 Laboratory Standard Calibration Gases

Laboratory standard gas blends were used to establish and maintain analytical instrument calibrations. Project standard gases were shipped to the EPA laboratory for identification prior to utilization. Gases are listed on the following page:

HC (ppm C)			
106.4	515.7	1383	4809
109.1	594.7	1657	5784
246.3	938.2	2613	8645
248	979.2	2635	9241
NO_x (ppm)			
30.9	93.2	405.6	999
47.8	194.2	513.9	2350
93.9	203.6	979	2368
CO (mole %)			
0.0522	0.2805	1.110	3.22
0.0990	0.2990	1.591	3.80
0.1500	0.676	2.109	4.67
0.2009	1.007	2.578	4.79
CO_2 (mole %)			
0.488	1.535	3.153	7.83
0.672	2.541	4.00	8.04
1.525	3.029	5.65	

2.4.6 Chassis Dynamometers

Two Clayton Model CT-200 chassis dynamometers were utilized during the program. Each was equipped with a 50 hp bridge and associated power meter. Variable inertia flywheel assemblies were the belt-driven type with 1500 to 5500 lb inertia selection capabilities. One of the dynamometers was used to perform the great majority of tests. The other was used to perform tests associated with the twenty evaporative emission tests in Denver.

2.4.7 Equipment for Special Additional Tasks

As indicated, several additional tasks were performed beyond the basic procedures of the Federal Register and the evaporative emission testing procedures of SAE J171. These were comprised of emission determinations at various operating modes, loaded vehicle emissions and emissions from vehicles towing trailers, emissions from air conditioned vehicles by the basic hot start CVS procedure, fuel economy tests by the Highway Fuel Economy Driving Schedule and sound level tests. Vehicle tailpipe emission measurements and certain engine diagnostic measurements were also performed. With the exception of the fuel economy and air conditioned vehicle emission factors tasks, each task required special additional equipment.

2.4.7.1 Special Equipment for Modal Emissions - Ordinarily, the vehicle's own braking system is utilized during emissions testing on the chassis dynamometer. In the normal vehicle/dynamometer test configuration, less than one-half of the braking capacity is provided by the drive wheel brakes of the test vehicle. As a result, the effective braking capacity under normal test conditions (i.e., the basic emission test of the Federal Register) is marginal. Additional braking requirements, presented by SDS operations, dictated more adequate braking be provided. In order to meet these requirements, an alternate brake system was provided.

The alternate system was comprised of a foot pedal type actuator and four pairs of pneumatically operated caliper-type brake pads. Two of the pairs were firmly mounted in such a way as to engage each of the two heavier or outer flywheels of the dynamometer inertia assembly. To avoid the possibility of altering the dynamometer power absorption characteristics a minimum tolerance of 0.125 inches was maintained between the pads and the flywheel when the calipers were in a relaxed position. During testing operations the foot contact area of the pneumatic actuator assembly was situated above or beside the vehicle brake pedal. When in use, the alternate system supplied all of the braking force required and was more than adequate to meet the vehicle deceleration rate demands of the SDS. As a matter of practice, the alternate system was used exclusively with respect to the SDS modal emissions tests at normal vehicle loading conditions and in conjunction with SDS modal emissions tests for loaded vehicles and vehicles towing trailers. The latter tests required more than the normal amount of inertia loading.

2.4.7.2 Special Equipment for Simulation of Loaded Vehicles and Vehicles Towing Trailers. - Design considerations relating to the loaded vehicle and vehicles towing trailer task included the requirement to provide additional inertia and road load. For the purpose of this study, vehicles were tested at three load conditions. The first involved testing at the inertia and road load settings of the Federal Register. The second involved testing at the inertia setting of the Federal Register plus 500 lbs. In this case the road load setting was not increased from the setting of the Federal Register to correspond to the additional inertia weight. The third test was performed at the inertia setting of the Federal Register plus 1,000 lbs. In the latter case, an empirically derived additional road load setting was applied.

Since additional road load power requirements were within the load capabilities of the dynamometer, no modifications to the dynamometer were necessary. With respect to inertia loading, however, it was necessary to provide additional loading capability. This was supplied by means of an auxiliary belt-driven flywheel assembly of 1000 lbs inertia weight which, when utilized, was coupled to the drive shaft of the Clayton flywheel inertia unit. The auxiliary flywheel assembly was equipped with the caliper-type pneumatically actuated brake system described in paragraph 2.4.7.1.

2.4.7.3 Special Equipment for Sound Level Test - SAE Standard J986a specifies the type and quality of instrumentation to be used in the conduct of sound level tests. For the purpose of this element of the study, a Bruel and Kjaer Model 2209 Precision Sound Level Meter was utilized. Instrument features include a precision microphone, A, B, C, D and Linear weighted sound level scales, sound level peak or RMS selection options, fast or slow response characteristics and continuous following or hold recording capabilities. In addition, the sound level kit supplied with the instrument included a Pistonphone type 4220 Calibrator, a tripod, 30 feet of microphone extension cable and a microphone windscreen.

The site utilized for sound level tests was a drag-strip facility situated to the south of San Antonio, Texas. The surface of the 60 by 4,000 foot road way is asphalt paved.

2.4.8 Miscellaneous Equipment

In addition to the emission equipment described, Varian Model G 1000 strip chart recorders with pre-printed chart paper were utilized to assist the vehicle operator to drive the prescribed driving schedules. Engine cooling was provided by 4300 cubic feet of air per minute fans. Dynamometer entrance and exit ramps were utilized at temporary sites to facilitate on-off vehicle flow and vehicle leveling. A ratcheting-type cable winch was employed to restrain the test vehicle during testing operations in addition to restraint provided by wheel chocks.

Engine diagnostics were performed using garage-type diagnostic equipment to measure tailpipe hydrocarbon and carbon monoxide emissions. Sun Electric Company Model EPA-75 emissions analyzers were utilized. Additional Sun Electric Company tachometers, dwellmeters and timing lights were utilized to record engine speed (rpm), ignition timing and ignition dwell.

Additional instrumentation was utilized for laboratory equipment calibration and qualification procedures. These are described below.

2.5 EQUIPMENT QUALIFICATION, CALIBRATION AND CROSS-CHECK

To ensure the validity of test data, extensive quality control procedures specified by the EPA were required initially and at periodic intervals throughout the program.

2.5.1 Constant Volume Sampler (CVS)

Constant volume samplers were flow calibrated prior to test start-up in each of the test areas. A calibrated laminar flow element (Merian Model 50, 0-1000 cfm) was utilized. Calibration of the element is traceable to the National Bureau of Standards.

CVS air flow, measured at the inlet to the CVS blower, was controlled by throttling. Blower flow rates were measured at ten incremental changes in blower differential pressure. Auxiliary devices employed in the calibration were a mercury barometer, close tolerance mercury filled thermometers, U-tube water and mercury manometers and an inclined water manometer. Flow data were subsequently computer processed. From these data, mid-range CVS operating pressures and the corresponding absolute blower flow rate was selected.

Subsequent flow calibrations were verified on a daily basis. This was accomplished by metering up to 20 grams of instrument grade propane into the sampler. Recovery was specified by the EPA to be within plus or minus two percent of the metered quantity. Metering operations were performed by the propane bomb weight loss techniques. A balance, accurate to 20 miligrams, was provided for this purpose.

2.5.2 Emissions Analyzers Console

Complete console instrumentation calibrations were performed initially and at 30 day intervals. Calibration curves for the HC, CO, CO_2 and NO_x analytical systems were established using the EPA named gases listed in paragraph 2.4.5. Each CO and CO_2 instrument was calibrated at five relatively evenly spaced points across each operating range. The HC and NO_x instruments were calibrated at three points across each operating range. EPA specified calibration tolerances of the smaller of plus or minus one percent of full-scale or plus or minus five percent of measured value were maintained. An additional curve check of each instrument was performed at the low, medium and high range points of each operating range on a weekly basis. Analytical system leak checks were performed on a daily basis.

2.5.3 Chassis Dynamometer

Chassis dynamometers were calibrated initially and again after major scheduled and unscheduled maintenance. Power and speed measuring instruments were first calibrated using the hardware and procedures supplied by the manufacturer. Subsequent to this, a more exacting calibration was performed using the coast-down techniques of the Federal Register. These techniques were applied at inertia settings of three, four and five thousand lbs and were also employed to verify the inertia of the 1000 lb auxiliary flywheel unit constructed to simulate the weight of a 1,000 lb trailer.

2.5.4 Evaporative Emissions Equipment

The SHED, used in Denver to determine evaporative hydrocarbon emissions, was calibrated in accordance with the procedures outlined in SAE Standard J171. The hydrocarbon FID was calibrated using hydrocarbon standard gases listed in paragraph 2.4.5 and as further defined in paragraph 2.4.2. Thermocouple calibrations were verified using a precision mercury filled thermometer.

Weight gain of the charcoal canisters used in conjunction with the evaporative emission trapping procedures of the Federal Register was measured using a balance of 20 milligram accuracy. Traps were pre-dried using the heated nitrogen procedure of the Federal Register.

2.5.5 Equipment for Special Additional Tasks

Equipment developed specifically to facilitate the performance of those tasks which utilized the SDS, namely the auxiliary braking system, required little in the way of special consideration. The only precaution was to eliminate the possibility of brake pad contact with the inertia flywheel driving non-braking modes. This was accomplished by maintaining a sizeable air gap between the flywheel and the brake pad contact area.

The auxiliary flywheel, used in the loaded vehicles and vehicles towing trailers task, was designed for an inertia weight of 1,000 lbs. Before this unit was put into service the inertia was checked by the coast-down technique of the Federal Register and was found to be very nearly 1,000 lbs. The procedures employed to develop road load settings for the towed vehicles element of the task are discussed in detail under paragraph 2.6.5.3.

With respect to the sound level task, the Model 2209 Precision Sound Level Meter was calibrated in accordance with the recommendations of the manufacturer. A Type 4220 Pistonphone Calibrator, which totally envelopes the head of the microphone and emits a constant sound level of 124 db, was used to calibrate the meter. A calibration was performed prior to each day's measurements and verified immediately before and after testing of each vehicle.

Sun Electric Company EPA-75 HC and CO analyzers were utilized to measure HC and CO tailpipe emissions at engine idling conditions. The instrument was calibrated initially by the local Sun Electric Company representative using Sun provided standard calibration gases. During testing, the analyzers were calibrated by ATL personnel within a relatively short time period before measurements were performed. Pre-test calibration was performed as specified by the manufacturer. The internal calibration circuit or the instrument was utilized for this purpose.

2.6 TEST PROCEDURES

A variety of vehicle testing and flow procedures was employed depending upon the specific tasks to which the vehicle was assigned. Testing options for those vehicles subjected to tests beyond the basic Federal Test Procedure (FTP) were developed and performed as follows:

In the Houston phase of the project, additional tests for modal emissions and air conditioned vehicle emission factors development were required. For those vehicles additionally tested for modal emissions only the sequence was as follows:

Basic FTP
Modal Test

For those vehicles additionally tested for air conditioned emission factors development only:

Basic FTP
Air conditioned vehicle tests

For those vehicles additionally tested for both modal emissions and air conditioned vehicle factors:

Basic FTP

Air conditioned vehicle tests

Modal test

In the Denver phase, additional tests for evaporative emissions, modal emissions and fuel economy were required. All vehicles were subjected to fuel economy tests. For those vehicles additionally tested for modal emissions only, the sequence was as follows:

Basic FTP and fuel economy test

Modal test

For those vehicles tested additionally for evaporative emissions only.

SHED diurnal

Basic FTP

SHED hot loss

Canister diurnal

Basic FTP (replicate)

Canister hot loss

Fuel economy test

For those vehicles tested additionally for both modal emissions and evaporative emissions, the modal test was performed after the fuel economy test in the latter of the above listed sequences.

In the Detroit phase, additional tests for fuel economy, modal emissions, air conditioned vehicle emission factors and emissions from loaded vehicles and vehicles towing trailers were performed. All vehicles were subjected to fuel economy tests which were performed in conjunction with the FTP. For those vehicles tested additionally for modal emissions only, the testing sequence was as follows:

Basic FTP and fuel economy test

Modal test

For those vehicles tested additionally for air conditioned vehicle emission factors development only:

Basic FTP and fuel economy test

Air conditioned vehicle test

For those vehicles tested additionally for loaded and towing vehicle emissions only:

Basic FTP and fuel economy test

Loaded and towing vehicle tests

For those vehicles tested additionally for both modal emissions and air conditioned vehicle emission factors development:

Basic FTP and fuel economy test

Air conditioned vehicle tests

Modal test

For those vehicles tested additionally for both modal emissions and loaded and towing vehicle emissions, the modal test was also utilized as part of the loaded and towing vehicle test. The sequence was as follows:

Basic FTP and fuel economy test

Modal test

Loaded and towing vehicle tests

For the single vehicle tested additionally with regards to all tasks:

Basic FTP and fuel-economy test

Air conditioned vehicle tests

Modal test

Loaded and towing vehicle tests

The following paragraphs describe the vehicle pre-conditioning and test procedures employed. Standard EPA tests which have been used extensively are described by reference only. Less commonly used testing procedures are described in more detail.

2.6.1 Vehicle Preparation

The test sample was divided into two main groups of vehicles, vehicles not subjected to evaporative emission tests and vehicles subjected to evaporative emission tests. Each required specific pre-test treatments. The San Antonio area vehicle sample, subjected to sound level test only, did not require pre-test treatment.

2.6.1.1 Preparation of Vehicles Not Subjected to Evaporative Emissions Testing - Upon acceptance from the vehicle owner, each vehicle fuel tank was drained of existing fuel and re-filled to forty percent of tank capacity with a local commercially available summer-grade fuel. An electrically powered gear-type pump was used to assist in the draining process. Summer-grade fuel was provided to minimize possible problems associated with vapor lock.

Following the fuel draining and refilling process, each vehicle was operated on city-type streets for a nominal time period of ten minutes to purge the fuel system of as-received fuel. At some later time, the subject vehicle was parked to begin the pre-test soak interval. Key-off time was closely regulated so as to maintain the EPA specified soak interval of 12-20 hours.

2.6.1.2 Preparation of Vehicles Subjected to Evaporative Emissions Testing- Shortly after a vehicle was accepted, the tank was drained of existing fuel. The majority of fuel was pumped from the tank filler neck. The balance was pumped from the tank via the fuel pump feed line. A pressure check of the tank system was performed. A pressure head of 14 inches H_2O was initially applied to the system via the line from the tank to the fuel pump. During the pressure check the line from the fuel tank to the vapor collection system and any existing fuel return lines were plugged. After five minutes in this condition the observed pressure was recorded. Evaporative control sytems were also inspected for proper operation. No corrective action was taken.

Following the pressure check, the tank was refilled with two gallons of Indolene 30. As-received fuel remaining in the fuel system was purged by vehicle operation on city-type streets for a nominal period of ten minutes. At some later time, the vehicle was parked to begin the specified 12-20 hour soak period. At the end of this interval, the tank was pumped dry, the tank heating blanket was installed and a thermocouple lead to monitor tank fuel temperatures was installed. Installation was accomplished via thermocouple insertion through a hole strategically drilled in the gas tank cap. Preconditioned (cold) fuel was then added to forty percent of tank capacity (to the nearest whole gallon) such that the temperature of the tank fuel after filling was 60 plus or minus 2 degrees Fahrenheit. The procedures of SAE Standard J 171 were then followed.

On the following day the canister test was performed. Vehicle operation in connection with SHED tests of the previous day served as the canister test preconditioning procedure.

2.6.2 Equipment Preparation

Prior to the first test of the day, instruments which had been idle or in a stand-by position were turned on to warm up. During the warm-up interval, analytical system leak checks were performed and the dynamometer was checked and warmed up in accordance with the Federal Register.

The driver's aid recorder was calibrated. The analytical system was checked for proper operation and gain, tuning and zero settings were recorded. Conversion efficiency of the chemiluminescent instrument thermal converter was checked and propane recovery tests were performed.

The fuel conditioning cart used in evaporative emission tests had been charged with the proper amount of fuel on the previous day. The temperature controller had been set to maintain the proper temperature. Fuel temperatures were closely regulated in the final minutes prior to the test.

2.6.3 Federal Exhaust Emission Test Procedure

Basic or standard exhaust emission tests, performed on all vehicles at all sites, were conducted in general accordance with the procedures of 37 Federal Register 221 which deals with cold and hot start tests. The exception was that hot start tests on non-evaporative test vehicles were continued for the full 1372 seconds of the driving schedule. Data obtained included cold and hot start transient and cold and hot start stabilized emissions with the exception of evaporative test vehicles. Modifications to the analytical systems for testing 1975 and later model year vehicles were not provided.

2.6.4 Modal Exhaust Emission Test Procedures

Modal exhaust emission tests were performed on the seventy-five (75) 1972, 1973 and 1974 model-year vehicles in each site.

Modal exhaust emission measurements are comprised of two separate tests; the Surveillance Driving Sequence and steady states. Each set of tests was preceeded by a soak period no longer than twenty minutes from the last sustained period of vehicle operation. At the end of the soak period the vehicle was operated at 50 miles per hour for a period of three minutes.

During this time the dynamometer load setting was checked and adjusted as necessary. Within one minute of the end of the 50 mph cruise period the vehicle was returned to idle and the SDS test was begun.

The vehicle was operated at idle for a period of one minute. No sampling was performed during the first thirty seconds of this period. For the remainder of the minute the dilute CVS exhaust sample was directed through the analytical system sample circuit. At the start of the Surveillance Driving Sequence sampling was begun and vehicle operation and sampling continued through the end of the SDS sampling period. The engine was allowed to run an additional period of ten seconds or longer. Steady state tests were then performed.

The SDS is comprised of 32 acceleration and deceleration modes. These modes consist of accelerations and decelerations between all possible combinations of five speeds; 0 mph, 15 mph, 30 mph, 45 mph and 60 mph. Average acceleration and decleration rates observed in a survey conducted in the Los Angeles Basin are used. In addition, six of the modes are repeated using acceleration and deceleration rates higher and lower than average rates observed in the survey.

For purposes of this study steady state tests were performed at seven steady state or constant speed conditions; 0 mph (idle), 5 mph, 10 mph, 15 mph, 30 mph, 45 mph, and 60 mph.

During SDS operations, a dilute CVS exhaust sample was directed through the analytical system and continuously monitored and recorded on a strip chart recorder. The mass emissions during each acceleration and decleration mode were calculated using the mass flow rate of the CVS and integrated strip chart recorder data. In addition, emissions for the

entire sequence were collected using the CVS bag collection technique of the Federal Register.

During steady state operations, emissions were collected and measured at each speed using the same collection techniques. Equilibrium was maintained for a minimum of 30 seconds at each test condition. A minimum sampling time of three minutes and a minimum sample of two cubic feet were provided at each of the steady states.

2.6.5 Evaporative Emission Test Procedure

The SHED and canister procedures, applied to twenty 1973 model-year vehicles from the Denver sample, are described in the paragraphs which follow.

2.6.5.1 SHED Procedure - SHED evaporative emission tests were performed in general accordance with SAE Standard J 171. The only significant departure was in the area of time and temperature tolerances applied to the diurnal phase of the test. Instead of the prescribed tank fuel temperature rise of 24 degrees Fahrenheit in 60 plus or minus 10 minutes, a temperature rise tolerance of 24 plus or minus two degrees in 60 minutes was provided. The tolerance of plus or minus two degrees resulted from the initial SAE J 171 tank fuel tolerance of (60) plus or minus one degree Fahrenheit and the project imposed final tolerance of (84) plus or minus one degree Fahrenheit. The diurnal phase of the test was terminated after 60 minutes.

Optional running loss measurements were not performed.

2.6.5.2 Canister Procedure - Canister method evaporative emission tests were performed on the following day on the same vehicles in accordance with the procedures of 37 Federal Register 221 (Section 85.073-13)

2.6.6 Special Additional Tests

Test procedures used to perform additional tasks are described in the paragraphs which follow.

2.6.6.1 Test Procedures for Loaded Vehicles and Vehicles Towing Trailers - Loaded vehicle and towing vehicle tests were performed on forty-two (42) Houston area vehicles, six each from the model-years 1967-1973. Testing was performed in general accordance with the modal exhaust emission test procedures described in paragraph 2.6.4. SDS and steady state tests were performed at three settings:

With inertia weight and road load settings unchanged from the Federal Register.

To simulate the addition of a maximum rate load of passengers and baggage.

To simulate the addition of a trailer of a size recommended as suitable for that particular vehicle.

A ten minute soak period preceeded each test. During this time inertia settings were changed as necessary. At the end of the soak period the vehicle was operated at 50 miles per hour for a period of three minutes. During this time the dynamometer load setting was checked and adjusted as necessary. The sampling and vehicle operating procedures of paragraph 2.6.4 were then followed beginning with the one minute pre-test idle period.

A prerequisite to the loaded vehicles and vehicles towing trailer task was to determine dynamometer road load settings to simulate the road load of both towing and towed vehicles. Three light-duty vehicles and a nominal 1,000 lb trailer were used for this purpose. Two of the light-duty vehicles, a 1970 Cadillac Coupe De Ville, and a 1970 Chrysler 4 door New Yorker, were utilized to develop the actual road load data.

The third vehicle, a 1967 Jeep Wagoneer, was used to test the sensitivity of the measuring techniques. The assumption was that the towed vehicle would exhibit less towing resistance behind the relatively high and blocky body configuration of the Wagoneer than behind the lower and more streamlined configuration of the Cadillac and Chrysler. A 5 by 8 foot U-Haul rental trailer was used in all cases as the towed vehicle. The actual weight of the trailer was 980 lbs.

The method of determining the additional loading imposed on the towing vehicle by the towed vehicle was as follows:

The speedometer of the towing vehicle was checked on the chassis dynamometer for a true speed indication of 50 miles per hour. Instrumentation consisting of a vacuum transducer and a strip chart recorder were installed in the towing vehicle and calibrated. The transducer was installed in communication with engine manifold vaccum. Multiple bi-directional 50 mile per hour passes were made on a section of level roadway. Manifold vacuum was recorded during each pass. The procedure was repeated until driving techniques improved to the point where data were consistently repeatable from run to run. The procedure was then applied to each of the towing vehicles operating with and without the trailer. Each of the towing vehicles was subsequently moved to the dynamometer for the purpose of relating manifold vacuum readings to road load dynamometer settings.

On the dynamometer each vehicle was operated at a constant speed of 50 miles per hour. Concurrently, dynamometer loading was varied in small increments until the manifold vacuum values developed during road operations were consistently maintained. Observed load settings were recorded and subsequently converted to actual road load horsepower. Data were then averaged to produce the following:

Vehicle	Test Condition	Inertia Wt. (lbs)	Actual Road Load (hp)	*F.R. Road Load (hp)
Wagoneer	Base Vehicle	4500	12.2	12.7
	Veh & Trailer	5500	25.4	
	Difference		13.2	
Cadillac	Base Vehicle	5000	11.6	13.4
	Veh & Trailer	6000	26.3	
	Difference		14.7	
Chrysler	Base Vehicle	4500	10.8	12.7
	Veh & Trailer	5500	25.1	
	Difference		14.3	

*Federal Register

As evidenced by these data, the procedures proved to be sensitive to differing aerodynamic design. The relatively square configuration of the Wagoneer resulted in the highest base vehicle road load power requirements of the three vehicles. The Wagoneer towing the trailer also resulted in the lowest difference in road load power requirements. The difference between the experimental data and the settings of the Federal Register can probably be accounted for by the fact that the data were developed in Denver in air of lower density. For purposes of the study, however, the data were considered representative.

A straight line was drawn between the 5,000 lb and 4,500 lb load points and projected to 4,000 lbs. The table shown below was developed and applied in the testing program to simulate the road load of vehicles towing trailers.

Inertia Wt (lbs)	Actual Road Load (hp)	
	Base	Towing
4,000	12.0	25.9
4,500	12.7	27.0
5,000	13.4	28.1

These results were ultimately used in the loaded vehicles and vehicles towing trailers exhaust emissions testing task and the testing sequence was performed at the following settings:

With inertia and road load settings of the Federal Register.

With the road load setting of the Federal Register unchanged but at 500 lbs. additional inertia weight.

With the inertia weight of the Federal Register increased by 1,000 lbs at the road load settings established for vehicles towing a 1,000 lb. trailer.

2.6.6.2 Test Procedures for Air Conditioned Vehicle Emission Factors Development - These tests were performed on 20 vehicles each in Houston and Detroit. Five vehicles from each of the model-years 1973, 1971, 1969 and 1967 were initially scheduled to be tested at each site. Vehicle selection in Detroit was subsequently modified and weighted toward the more recent model-year vehicles. Vehicles chosen were equipped with factory installed, manually controlled air conditioners in proper operating condition.

Testing procedures consisted of three Federal 1972 hot start tests, transient and stabilized segments, in addition to the original test by the basic FTP driving schedule. Each test was preceeded by a ten minute soak. The original test was performed with the air conditioner off, but simulated by the additional ten percent load setting of the Federal Register. Hot start tests were performed as follows:

Hot Start Test	A/C	A/C Simulation
1st (part of original test)	off	on
2nd	on	off
3rd	off	off
4th	off	on

During the second test the air conditioner was set for maximum cooling with the fan on an intermediate level. The driver's window was fully open during each test. All other windows were closed.

Road load settings were changed as necessary immediately after the hot stabilized portion of each test was completed. The test vehicle was used to make changes.

2.6.6.3 Test Procedures for Fuel Economy - Fuel economy tests were performed on all vehicles in Denver and Detroit. Starting with each vehicle in a warmed-up condition (at least 7.5 miles of operation occuring within thirty-five minutes of the start of pre-conditioning), each vehicle was operated at 50 mph for a period of three minutes. Within one minute of the end of the cruise period the vehicle commenced operation over the EPA Highway Fuel Economy Test Schedule. A CVS sample bag was initiated two seconds prior to the start of the schedule and terminated two seconds after the end of the schedule.

2.6.6.4 Test Procedures for Sound Level - Sound level tests were performed on 85 San Antonio area vehicles from model-years 1967 through 1973. All 85 vehicles were subjected to a combination of the SAE J 986a procedure and five EPA specified Use Cycle Modes. In addition 10 vehicles were further tested at two idle modes for use in decibel contour development.

The SAE 986a procedure involves sound level measurement while the vehicle is operated within the prescribed range of measurement. During this procedure the microphone is situated 50 feet from the centerline of the vehicle path at a height of four feet above the ground plane. From an approach speed of 30 mph, WOT is established when the front of the vehicle reaches a line 25 feet before a line through the microphone normal to the vehicle path. The lowest transmission gear or range is used such that the front of the vehicle will have reached or passed a line 25 feet beyond the microphone line when maximum rated engine speed is reached. At this point the throttle is closed and the test continued until the vehicle reaches a line 125 feet beyond the microphone line.

The EPA Use Cycle Modes are comprised of the following:

A 20 mph cruise.

A 40 mph cruise.

A 60 mph cruise.

A 1/4 g acceleration from a stop.

An idle mode.

Measurements during the cruise and acceleration modes of the use cycle were taken during the interval from where the front of the vehicle reached a line 25 feet before the microphone line to a line 25 feet beyond the microphone line. Idle mode measurements were taken from the driver's side at curb idle (Drive gear for automatic transmisson equipped vehicles) on the centerline of the vehicle. The distance from the microphone to the perimeter of the vehicle at which the highest sound level occured was reported.

Use cycle cruise modes were performed on automatic transmission equipped vehicles in the highest drive gear. For manual transmission equipped vehicles; the 20 mph cruise mode was performed with the transmission in the second to highest gear; 40 mph and 60 mph cruise modes were performed in the highest gear. The 1/4 g acceleration was performed in the drive range for automatic transmission equipped vehicles. This mode was performed in first gear for manual transmission equipped vehicles.

Decibel contours were developed at two idle modes, curb idle and 1200 rpm. Curb idle measurements were performed in drive gear for automatic transmission equipped vehicles. The contour developed for 1200 rpm was performed in a neutral gear. The method employed for this type of testing is described below.

From the geometric center of the vehicle, 16 equally spaced radii were established. Along each radius, measurements were taken at three foot intervals from the geometric center unless the measurement required the equipment to be within the area above the "shadow" of the vehicle. In this case, the first measurement was taken at the first interval beyond the shadow. Thereafter, there were seven additional readings taken at three foot intervals. Beyond these eight measurements there were six additional measurements obtained at 48, 60, 72, 84, and 96 feet from the geometric center. On each radius once the sound level dropped to a point 5 dbA above the ambient, the test on that radius was considered to be complete.

Also, for each idle mode, two measurements were taken at the driver's position within the vehicle. The first was taken with the windows closed and the second was taken with the windows open. During these measurements the operator was situated in the driver's seat. Microphone placement was near the operator's right ear with the head pointed toward the roof of the vehicle.

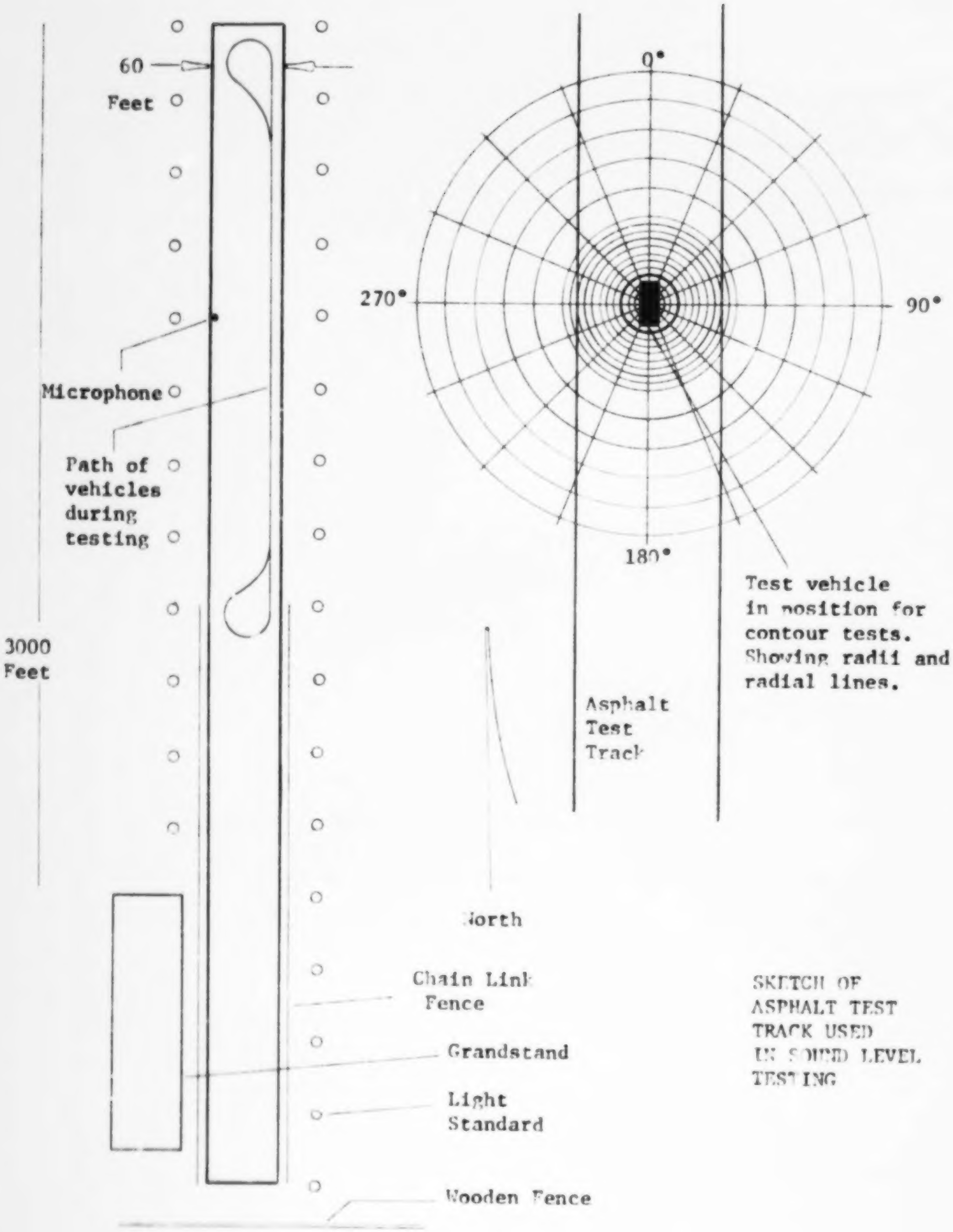
All measurements were taken on the dbA scale using the slow response circuit of the sound level meter described in paragraph 2.4.7.3 of this report. Rms values as opposed to peak values were measured.

A drawing showing the layout of the drag-strip where sound level tests were performed is shown below. As indicated in the sketch, measurements were taken while the test vehicle was operated or parked on the northern half of the track approximately 0.4 miles from the nearest major reflective surface, the grandstands. The only protrusions in the vicinity of the test area were a number of round 6 inch diameter light standards. The standards, rising 25 to 30 feet into the air, were situated on both sides of the track at 50 foot intervals.

The terrain of the area was relatively flat for several hundred feet on both sides of the track. The ground plane in this area was composed of a well compacted clay-like material, sparsely covered with a thin growth of vegetation. What little vegetation did exist was cropped two to three inches from the ground.

A sketch showing the manner in which vehicles were situated for decibel contour development is also provided in the drawing. During contour development, each test vehicle was headed north and centered on the axis of the radii. The first set of readings was taken along the radius line to the front of the vehicle (0.0). The second set was taken 22.4 degrees from the 0.0 degree line in a clockwise direction as viewed from the top of the vehicle. Thereafter, measurements were taken along each radius line, until the 0.0 degree line was reached. The measurement procedures were identical for both curb idle and 2500 rpm operations.

2.6.6.5 After Test Procedures - On completion of emissions testing, engine idle speed, ignition timing and dwell, and tailpipe CO and HC were measured and recorded. Tailpipe CO and HC measurements were taken at curb idle with both laboratory and garage type inspection instrumentation.


60 Feet
Microphone
Path of vehicles during testing
3000 Feet
0°
90°
180°
270°
Test vehicle in position for contour tests. Showing radii and radial lines.
Asphalt Test Track
North
Chain Link Fence
Grandstand
Light Standard
Wooden Fence

SKETCH OF ASPHALT TEST TRACK USED IN SOUND LEVEL TESTING

2.6.7 Daily Test Schedule

Test schedules were dictated by the project time constraints and tasks assigned to each site. Generally, the work was performed at the rate of two shifts per day. In Houston and Detroit the more lengthy tests were scheduled for completion in the early stages of testing. In Houston, for example, tests were scheduled at the rate of one air conditioned vehicle emissions test and one modal emissions test per shift until one or more of these tasks were completed. Work shifts were rounded out with the required number of basic Federal emission tests. Similarly, Detroit testing was scheduled at the rate of one air conditioned vehicle emissions test and one loaded vehicle and vehicles towing trailers emissions test per shift. Modal emissions tests and basic Federal emissions tests were phased in at varying rates as the additional testing tasks were completed. In Denver, on the other hand, the more basic tests were performed first and the more lengthy evaporative emissions tests were performed last.

2.7 DATA HANDLING

An important phase of the program was the orderly accumulation, verification, analysis and transmittal of data. In recognition, an elaborate data collection and verification system was implemented. Data handling, processing and calculation procedures are described in the paragraphs which follow.

2.7.1 Data Collection

Data were checked at each site for completeness and transmitted to the Denver office for processing. Transmitted packets included all strip charts and raw data sheets for each vehicle tested the previous day. On receipt in Denver, the packets were checked to verify that all required materials had been transmitted. Data forms were additionally checked for completeness.

2.7.2 Data Processing

Processing was performed manually and by computer operations. Data were first transmitted to computer punch tape and placed in computer storage. An edit program was then utilized to screen for keypunch and logical errors. Corrections were made as necessary and raw data were output for proof reading against raw data input forms. Data were further corrected as necessary. Processing operations were then completed and finished copy were output and inspected in detail. Questionable data were noted and returned for further verification and processing.

2.7.3 Calculation of Results

The basic calculations of emission results for each of the various tasks were performed by use of the formulae in 37 Federal Register 221, 36 Federal Register 128 and as amended in 38 Federal Register 124. Fuel economy data were calculated using the carbon balance equation (1) from Appendix III of "Automotive Exhaust Emission Surveillance - Analysis of the FY 72 Program, ([illegible]-046/2-74-001), given on page III - 3. A hydrogen/carbon ratio of 1.85 was assumed even though Denver area fuel was found to have a ratio of about 2.20.

Variations used for each task are described in the paragraphs which follow.

2.7.3.1 Exhaust Emissions (Federal Test Procedure) - Emission results were calculated as outlined in the Federal Register. In addition, cold start (1972 FTP equivalent) results were calculated by summing the total emissions of the cold transient and cold stabilized phases of the test and dividing the total by 7.5 miles. Hot start results were calculated by summing the total emissions of the hot transient and hot stabilized phases and divding by 7.5 miles to obtain grams per mile.

2.7.3.2 Modal Emissions - The formulae of the Federal Register were used to calculate modal emissions using the mass flow rate of the CVS, integrated dilute concentration readings and miles per mode. The humidity correction factor of the Federal Register was not applied to modal data. Steady state results were calculated using mass flow rate, sample bag concentrations and the calculated distance traveled per increment of time. Results of the idle mode were calculated in grams per minute. Sample bag test results were computed using the distance constant of 0.780 miles for the SDS. Steady state data, excluding 5 mph and 10 mph, and modal data were combined to produce integrated emission results equivalent to the bag results.

2.7.3.3 Fuel Economy - Fuel Economy data were calculated using the CVS emission test results as calculated by the equations of the Federal Register and the fuel economy equation referenced in paragraph 2.7.3. The Highway Fuel Economy Test distance constant of 10.2 miles per test was applied.

2.7.3.4 Evaporative Emissions - Evaporative emissions measured by the canister method were obtained from the trap weight before and after the test. The difference in weight is reported.

Evaporative losses by the SHED technique were calculated in accordance with the equations of SAE J171.

2.7.3.5 Air Conditioned Vehicle Emissions - Emissions from air conditioned vehicles were calculated in the manner described in paragraph 2.7.3.1 for the hot start tests.

2.7.3.6 Emissions from Loaded Vehicles and Vehicles Towing Trailers - Emission test results from loaded vehicles and vehicles towing trailers were calculated in the manner described for modal emissions in paragraph 2.7.3.2.

2.7.3.7 Sound Level Tests - These data are comprised of simple averages as required in SAE J986a and required no special treatment.

3. TEST RESULTS

3.1 DISCUSSION OF EXHAUST EMISSION AND FUEL ECONOMY TEST RESULTS

3.1.1 Federal Test Procedure and Highway Fuel Economy Test Exhaust Emissions and Fuel Economy

Test results by model-year are presented for each site on the three pages comprising Table 3 which follow this paragraph. Emissions data are summarized as follows:

Test Procedure	City	HC		CO		NO_x	
		mean	S.D.	mean	S.D.	mean	S.D.
1972	Denver	6.87	2.99	108.5	43.8	2.84	1.41
1975		6.17	2.63	90.0	41.5	2.87	1.46
1972	Houston	5.95	3.76	80.7	47.4	5.27	2.46
1975		5.20	3.34	70.7	44.5	5.39	2.55
1972	Detroit	6.71	7.26	77.2	50.0	5.14	2.07
1975		5.85	6.59	66.8	43.3	5.31	2.17

As indicated, HC and CO emissions from the Denver sample are higher than those from the Houston and Detroit samples. NO_x emissions in Denver are considerably lower. Similarly, HC emissions from the Detroit sample are higher than those from the Houston sample, although Detroit-area CO emissions are lower. This can probably be attributed to one or more high HC emitting 1968 model-year vehicles (from Table 3) in the Detroit sample.

Fuel economy data for the three samples are summarized below. The Highway Fuel Economy Test (HFET) was not performed in Houston.

City	Fuel Economy by Procedure (mpg)					
	1972		1975		HFET	
	mean	S.D.	mean	S.D.	mean	S.D.
Denver	12.2	2.84	12.9	2.97	18.2	4.36
Houston	10.9	2.31	11.4	2.38		
Detroit	11.7	2.60	12.2	2.66	17.7	3.91

As indicated in the data above, fuel economy measured by the Highway Fuel Economy Test appears to be about 50% higher than fuel economy measured by the FTP. The HFET driving schedule, however, is comprised of operation at relatively constant speed with an average speed of 48.6 miles per hour and two idle modes of relatively short duration while the FTP drving schedule is comprised of operation at varying speeds with an average speed of less than 20 miles per hour and eighteen idle modes of varying duration.

TABLE 3

EXHAUST EMISSION TEST RESULTS VS. MODEL YEAR

DENVER

1972 FEDERAL TEST PROCEDURE

MODEL YEAR	# OF VEH.	AVERAGE MILEAGE	HC		CO		CO2		NOXC		-----FUEL ECONOMY----- FTP		HFET	
			MEAN	S.D.	MEAN	S.D.	MEAN	S.D.	MEAN	S.D.	MEAN	S.D.	MEAN	S.D.
1967	17	66358	11.02	3.58	156.9	47.0	463.4	110.3	2.26	1.33	11.9	2.46	17.6	3.54
1968	18	63522	8.41	3.31	106.8	36.6	497.1	126.9	3.15	1.28	12.8	2.44	19.4	3.88
1969	21	54687	7.98	2.59	115.5	41.8	516.2	90.6	3.67	1.61	12.3	2.00	18.3	2.59
1970	22	45723	7.53	2.70	117.6	35.5	526.1	116.8	3.14	1.48	12.1	2.22	17.6	3.64
1971	27	32651	6.16	1.74	106.7	25.2	535.6	158.6	3.09	1.15	12.3	3.16	18.2	4.67
1972	30	27461	5.92	2.03	98.5	52.0	554.1	167.0	3.30	1.51	12.2	3.28	18.4	5.30
1973	35	14334	5.03	1.95	93.3	41.9	556.2	168.8	1.99	.93	12.3	3.46	18.4	5.32
1974	10	5254	4.47	0.55	83.4	14.6	626.1	177.4	1.84	.67	11.5	2.74	16.7	4.06
TOTALS	180	37141	6.87	2.99	108.5	43.4	533.6	146.9	2.84	1.41	12.2	2.84	18.2	4.36

1975 FEDERAL TEST PROCEDURE

MODEL YEAR	# OF VEH.	AVERAGE MILEAGE	HC		CO		CO2		NOXC		-----FUEL ECONOMY----- FTP		HFET	
			MEAN	S.D.	MEAN	S.D.	MEAN	S.D.	MEAN	S.D.	MEAN	S.D.	MEAN	S.D.
1967	17	66358	9.87	2.87	146.1	42.5	447.5	106.1	2.22	1.33	12.5	2.42	17.6	3.54
1968	18	63522	7.65	3.29	97.0	34.4	476.7	118.6	3.21	1.37	13.6	2.62	19.4	3.88
1969	21	54687	7.07	2.20	104.6	38.7	501.0	85.8	3.76	1.64	12.9	2.00	18.3	2.59
1970	22	45723	6.56	2.07	105.2	31.7	511.2	112.6	3.22	1.55	12.7	2.30	17.6	3.64
1971	27	32651	5.51	1.50	96.9	22.2	521.7	153.7	3.18	1.25	12.8	3.27	18.2	4.67
1972	30	27461	5.40	1.92	90.5	53.3	533.8	158.9	3.29	1.55	12.8	3.46	18.4	5.30
1973	35	14334	4.54	1.79	84.7	41.3	533.6	159.3	1.96	.87	13.0	3.68	18.4	5.32
1974	10	5254	4.19	0.50	79.0	14.7	601.1	171.3	1.81	.82	12.0	2.91	16.7	4.06
TOTALS	180	37141	6.17	2.63	99.0	41.5	515.2	140.1	2.87	1.46	12.9	2.97	18.2	4.36

EMISSION RESULTS IN GRAMS PER MILE
FUEL ECONOMY IN MILES PER GALLON

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

TABLE 3

EXHAUST EMISSION TEST RESULTS VS. MODEL YEAR

HOUSTON

1972 FEDERAL TEST PROCEDURE

MODEL YEAR	# OF VEH.	AVERAGE MILEAGE	HC MEAN	HC S.D.	CO MEAN	CO S.D.	CO2 MEAN	CO2 S.D.	NOXC MEAN	NOXC S.D.	FUEL ECONOMY FTP MEAN	FUEL ECONOMY FTP S.D.	FUEL ECONOMY HFET MEAN	FUEL ECONOMY HFET S.D.
1967	17	73240	10.07	4.44	134.1	68.3	597.3	113.9	4.43	1.81	10.6	2.05	####	####
1968	18	68205	9.32	6.68	101.9	45.5	649.8	140.9	6.38	2.79	10.6	1.85	####	####
1969	21	63563	5.39	1.76	71.3	38.7	623.4	105.4	7.02	2.34	11.8	1.82	####	####
1970	22	58145	5.19	1.47	71.8	22.9	682.8	136.5	5.67	2.09	10.9	2.17	####	####
1971	27	37988	5.39	2.31	77.7	47.1	653.0	158.5	5.69	2.43	11.2	2.77	####	####
1972	30	26647	5.14	3.79	76.2	41.4	689.7	185.0	5.61	2.44	10.7	2.52	####	####
1973	35	14458	4.73	2.10	68.8	43.0	692.5	189.1	3.76	1.90	10.9	2.55	####	####
1974	10	5478	3.92	1.21	54.1	29.4	772.8	176.6	3.30	1.40	10.2	2.10	####	####
TOTALS	180	41515	5.95	3.76	80.7	47.4	668.1	160.1	5.27	2.46	10.9	2.31	####	####

1975 FEDERAL TEST PROCEDURE

MODEL YEAR	# OF VEH.	AVERAGE MILEAGE	HC MEAN	HC S.D.	CO MEAN	CO S.D.	CO2 MEAN	CO2 S.D.	NOXC MEAN	NOXC S.D.	FUEL ECONOMY FTP MEAN	FUEL ECONOMY FTP S.D.	FUEL ECONOMY HFET MEAN	FUEL ECONOMY HFET S.D.
1967	17	73240	[illegible]	3.66	122.0	61.1	582.4	134.4	4.94	1.86	11.2	[illegible]	####	####
1968	18	68205	[illegible]	7.11	87.8	43.2	629.7	133.1	6.59	2.77	11.2	1.34	####	####
1969	21	63563	4.57	1.23	59.4	33.4	613.6	95.4	7.29	2.52	12.4	1.96	####	####
1970	22	58145	4.32	1.39	59.1	29.9	[illegible]	[illegible]	5.74	2.11	11.5	2.16	####	####
1971	27	37988	4.25	2.16	67.8	41.4	634.5	[illegible]	5.85	2.58	11.7	2.54	####	####
1972	30	26647	4.84	3.59	67.8	40.1	648.4	176.6	5.72	2.55	11.2	2.64	####	####
1973	35	14458	4.12	1.57	62.2	41.8	671.	180.1	3.82	1.98	11.3	2.59	####	####
1974	10	5478	3.57	1.35	49.7	35.2	746.1	173.2	3.39	1.47	10.8	2.12	####	####
TOTALS	180	41515	[illegible]	3.34	73.7	44.5	649.4	[illegible]	[illegible]	[illegible]	11.4	2.38	####	####

EMISSION RESULTS IN GRAMS PER MILE
FUEL ECONOMY IN MILES PER GALLON

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

AUTOMOTIVE TESTING LABORATORIES, INC.
19900 E. COLFAX, AURORA, COLO. 80011

TABLE 3

EXHAUST EMISSION TEST RESULTS VS. MODEL YEAR

DETROIT

1972 FEDERAL TEST PROCEDURE

MODEL YEAR	# OF VEH.	AVERAGE MILEAGE	HC MEAN	HC S.D.	CO MEAN	CO S.D.	CO2 MEAN	CO2 S.D.	NOXC MEAN	NOXC S.D.	FUEL ECONOMY FTP MEAN	FUEL ECONOMY FTP S.D.	FUEL ECONOMY HFET MEAN	FUEL ECONOMY HFET S.D.
1967	17	68791	11.46	5.43	134.5	56.4	545.6	108.0	4.63	1.92	11.2	1.89	16.8	2.85
1968	18	57430	10.56	16.85	91.5	71.3	562.8	93.4	6.05	2.70	12.0	2.61	18.2	3.50
1969	21	54761	7.68	5.07	89.3	48.9	561.9	104.1	5.90	1.53	12.2	2.41	18.7	3.41
1970	22	44648	6.71	6.11	77.1	27.3	602.3	110.5	6.30	1.85	11.9	2.11	18.2	3.35
1971	27	35490	4.85	2.07	60.9	28.9	622.4	186.4	5.31	1.84	12.1	3.22	18.1	4.61
1972	30	25489	6.25	7.14	78.5	60.2	643.5	161.8	5.21	2.21	11.3	2.87	17.4	4.47
1973	35	19040	4.43	2.42	54.7	22.5	660.2	171.6	4.03	1.54	11.7	2.79	17.8	4.29
1974	10	6409	4.14	2.10	47.7	27.1	749.6	170.3	3.49	1.48	10.6	1.90	15.6	3.05
TOTALS	180	37715	6.71	7.26	77.2	50.0	617.6	153.2	5.14	2.07	11.7	2.60	17.7	3.91

1975 FEDERAL TEST PROCEDURE

MODEL YEAR	# OF VEH.	AVERAGE MILEAGE	HC MEAN	HC S.D.	CO MEAN	CO S.D.	CO2 MEAN	CO2 S.D.	NOXC MEAN	NOXC S.D.	FUEL ECONOMY FTP MEAN	FUEL ECONOMY FTP S.D.	FUEL ECONOMY HFET MEAN	FUEL ECONOMY HFET S.D.
1967	17	68791	9.91	4.99	120.0	50.0	528.1	105.2	4.61	1.91	11.9	1.91	16.8	2.85
1968	18	57430	9.41	15.56	75.5	54.6	554.9	86.6	6.44	2.81	12.6	2.47	18.2	3.50
1969	21	54761	6.56	4.59	74.8	38.4	549.4	99.8	6.21	1.62	12.9	2.47	18.7	3.41
1970	22	44648	6.00	5.76	67.2	25.5	588.3	106.3	6.49	1.94	12.6	2.12	18.2	3.35
1971	27	35490	4.04	1.47	50.3	26.7	606.6	179.2	5.56	1.91	12.7	3.39	18.1	4.61
1972	30	25489	5.48	6.38	69.5	54.6	625.6	155.2	5.36	2.38	11.8	2.94	17.4	4.47
1973	35	19040	3.85	1.45	49.1	21.6	641.5	163.6	4.05	1.52	12.1	2.84	17.8	4.29
1974	10	6409	3.65	1.79	41.8	25.3	732.8	162.3	3.54	1.35	11.0	1.89	15.6	3.05
TOTALS	180	37715	5.85	6.59	66.8	43.3	602.1	146.9	5.31	2.17	12.2	2.66	17.7	3.91

EMISSION RESULTS IN GRAMS PER MILE
FUEL ECONOMY IN MILES PER GALLON

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

3.1.1.1 Vehicles Meeting Federal Emission Standards - Data relative to vehicles at each site meeting Federal 1972, 1973/1974 and 1975 emissions standards are shown in Table 4. The six pages comprising Table 4 follow this paragraph. Data are summarized as follows:

City	Standard	Vehicles Meeting Standards							
		HC		CO		NO_x		Both or All	
		(No.)	(%)	(No.)	(%)	(No.)	(%)	(No.)	(%)
Denver	1972	13	7.2	7	3.9	N/A		4	2.2
	1973/1974	13	7.2	7	3.9	114	63.3	1	0.6
	1975	1	0.6	0	0.0	114	63.3	0	0.0
Houston	1972	20	11.1	24	13.3	N/A		12	6.7
	1973/1974	20	11.1	24	13.3	32	17.8	6	3.3
	1975	0	0.0	2	1.1	33	18.3	0	0.0
Detroit	1972	27	15.0	32	17.8	N/A		17	9.4
	1973/1974	27	15.0	32	17.8	28	15.6	5	2.8
	1975	1	0.6	2	1.1	30	16.7	0	0.0

TABLE 4

VEHICLES MEETING FEDERAL STANDARDS

DENVER

1972 FEDERAL STANDARDS

MODEL YEAR	# OF VEH.	HC <3.4 GM/MI NO.	HC <3.4 GM/MI %	CO <39 GM/MI NO.	CO <39 GM/MI %	PASSED BOTH NO.	PASSED BOTH %
1967	17	0	0.0	0	0.0	0	0.0
1968	18	0	0.0	1	5.6	0	0.0
1969	21	1	4.8	1	4.8	1	4.8
1970	22	1	4.5	0	0.0	0	0.0
1971	27	1	3.7	0	0.0	0	0.0
1972	30	3	10.0	2	6.7	1	3.3
1973	35	7	20.0	3	8.6	2	5.7
1974	10	0	0.0	0	0.0	0	0.0
TOTALS	180	13	7.2	7	3.9	4	2.2

1973/1974 FEDERAL STANDARDS

MODEL YEAR	# OF VEH.	HC <3.4 GM/MI NO.	HC <3.4 GM/MI %	CO <39 GM/MI NO.	CO <39 GM/MI %	NOX <3.0 GM/MI NO.	NOX <3.0 GM/MI %	PASSED ALL THRE NO.	PASSED ALL THRE %
1967	17	0	0.0	0	0.0	14	82.4	0	0.0
1968	18	0	0.0	1	5.6	9	50.0	0	0.0
1969	21	1	4.8	1	4.8	10	47.6	0	0.0
1970	22	1	4.5	0	0.0	13	59.1	0	0.0
1971	27	1	3.7	0	0.0	14	51.9	0	0.0
1972	30	3	10.0	2	6.7	14	46.7	0	0.0
1973	35	7	20.0	3	8.6	31	88.6	1	2.9
1974	10	0	0.0	0	0.0	9	90.0	0	0.0
TOTALS	180	13	7.2	7	3.9	114	63.3	1	0.6

TABLE 4, CONT'D

VEHICLES MEETING FEDERAL STANDARDS

DENVER

1975 FEDERAL STANDARDS

MODEL YEAR	# OF VEH.	HC <1.5 GM/MI NO.	HC <1.5 GM/MI %	CO <15 GM/MI NO.	CO <15 GM/MI %	NOX <3.1 GM/MI NO.	NOX <3.1 GM/MI %	PASSED ALL THREE NO.	PASSED ALL THREE %
1967	17	0	0.0	0	0.0	14	82.4	0	0.0
1968	18	0	0.0	0	0.0	10	55.6	0	0.0
1969	21	0	0.0	0	0.0	8	38.1	0	0.0
1970	22	0	0.0	0	0.0	11	50.0	0	0.0
1971	27	0	0.0	0	0.0	15	55.6	0	0.0
1972	30	0	0.0	0	0.0	15	50.0	0	0.0
1973	35	1	2.9	0	0.0	32	91.4	0	0.0
1974	10	0	0.0	0	0.0	9	90.0	0	0.0
TOTALS	180	1	0.6	0	0.0	114	63.3	0	0.0

TABLE 4

VEHICLES MEETING FEDERAL STANDARDS

HOUSTON

1972 FEDERAL STANDARDS

MODEL YEAR	# OF VEH.	HC <3.4 GM/MI NO.	HC <3.4 GM/MI %	CO <39 GM/MI NO.	CO <39 GM/MI %	PASSED BOTH NO.	PASSED BOTH %
1967	17	0	0.0	0	0.0	0	0.0
1968	18	1	5.6	0	0.0	0	0.0
1969	21	0	0.0	4	19.0	0	0.0
1970	22	0	0.0	1	4.5	0	0.0
1971	27	3	11.1	4	14.8	3	11.1
1972	30	3	10.0	2	6.7	1	3.3
1973	35	9	25.7	8	22.9	4	11.4
1974	10	4	40.0	5	50.0	4	40.0
TOTALS	180	20	11.1	24	13.3	12	6.7

1973/1974 FEDERAL STANDARDS

MODEL YEAR	# OF VEH.	HC <3.4 GM/MI NO.	HC <3.4 GM/MI %	CO <39 GM/MI NO.	CO <39 GM/MI %	NOX <3.0 GM/MI NO.	NOX <3.0 GM/MI %	PASSED ALL THREE NO.	PASSED ALL THREE %
1967	17	0	0.0	0	0.0	4	23.5	0	0.0
1968	18	1	5.6	0	0.0	1	5.6	0	0.0
1969	21	0	0.0	4	19.0	1	4.8	0	0.0
1970	22	0	0.0	1	4.5	1	4.5	0	0.0
1971	27	3	11.1	4	14.8	5	18.5	0	0.0
1972	30	3	10.0	2	6.7	3	10.0	0	0.0
1973	35	9	25.7	8	22.9	12	34.3	3	8.6
1974	10	4	40.0	5	50.0	5	50.0	3	30.0
TOTALS	180	20	11.1	24	13.3	32	17.8	6	3.3

AUTOMOTIVE TESTING LABORATORIES, INC.
19600 E. COLFAX, AURORA, COLO. 80011

TABLE 4, CONT'D

VEHICLES MEETING FEDERAL STANDARDS

HOUSTON

1975 FEDERAL STANDARDS

MODEL YEAR	# OF VEH.	HC <1.5 GM/MI		CO <15 GM/MI		NOX <3.1 GM/MI		PASSED ALL THREE	
		NO.	%	NO.	%	NO.	%	NO.	%
1967	17	0	0.0	0	0.0	4	23.5	0	0.0
1968	18	0	0.0	0	0.0	1	5.6	0	0.0
1969	21	0	0.0	0	0.0	1	4.8	0	0.0
1970	22	0	0.0	0	0.0	1	4.5	0	0.0
1971	27	0	0.0	0	0.0	5	18.5	0	0.0
1972	30	0	0.0	0	0.0	4	13.3	0	0.0
1973	35	0	0.0	2	5.7	12	34.3	0	0.0
1974	10	0	0.0	0	0.0	5	50.0	0	0.0
TOTALS	180	0	0.0	2	1.1	33	18.3	0	0.0

TABLE 4

VEHICLES MEETING FEDERAL STANDARDS

DETROIT

1972 FEDERAL STANDARDS

MODEL YEAR	# OF VEH.	HC <3.4 GM/MI NO.	HC <3.4 GM/MI %	CO <39 GM/MI NO.	CO <39 GM/MI %	PASSED BOTH NO.	PASSED BOTH %
1967	17	0	0.0	0	0.0	0	0.0
1968	18	0	0.0	3	16.7	0	0.0
1969	21	0	0.0	1	4.8	0	0.0
1970	22	3	13.6	2	9.1	2	9.1
1971	27	4	14.8	3	11.1	2	7.4
1972	30	7	23.3	7	23.3	4	13.3
1973	35	9	25.7	11	31.4	5	14.3
1974	10	4	40.0	5	50.0	4	40.0
TOTALS	180	27	15.0	32	17.8	17	9.4

1973/1974 FEDERAL STANDARDS

MODEL YEAR	# OF VEH.	HC <3.4 GM/MI NO.	HC <3.4 GM/MI %	CO <39 GM/MI NO.	CO <39 GM/MI %	NOX <3.0 GM/MI NO.	NOX <3.0 GM/MI %	PASSED ALL THREE NO.	PASSED ALL THREE %
1967	17	0	0.0	0	0.0	3	17.6	0	0.0
1968	18	0	0.0	3	16.7	4	22.2	0	0.0
1969	21	0	0.0	1	4.8	0	0.0	0	0.0
1970	22	3	13.6	2	9.1	1	4.5	1	4.5
1971	27	4	14.8	3	11.1	4	14.8	0	0.0
1972	30	7	23.3	7	23.3	4	13.3	1	3.3
1973	35	9	25.7	11	31.4	7	20.0	1	2.9
1974	10	4	40.0	5	50.0	5	50.0	2	20.0
TOTALS	180	27	15.0	32	17.8	28	15.6	5	2.8

AUTOMOTIVE TESTING LABORATORIES, INC.
19[illegible] E. COLFAX, AURORA, COLO. 80[illegible]

TABLE 4, CONT'D

VEHICLES MEETING FEDERAL STANDARDS

DETROIT

1975 FEDERAL STANDARDS

MODEL YEAR	# OF VEH.	HC <1.5 GM/MI NO.	HC <1.5 GM/MI *	CO <15 GM/MI NO.	CO <15 GM/MI *	NOX <3.1 GM/MI NO.	NOX <3.1 GM/MI *	PASSED ALL THRE NO.	PASSED ALL THRE *
1967	17	0	0.0	0	0.0	3	17.6	0	0.0
1968	18	0	0.0	0	0.0	4	22.2	0	0.0
1969	21	0	0.0	0	0.0	0	0.0	0	0.0
1970	22	0	0.0	0	0.0	1	4.5	0	0.0
1971	27	0	0.0	0	0.0	4	14.8	0	0.0
1972	30	0	0.0	0	0.0	5	16.7	0	0.0
1973	35	0	0.0	1	2.9	8	22.9	0	0.0
1974	10	1	10.0	1	10.0	5	50.0	0	0.0
TOTALS	180	1	0.6	2	1.1	30	16.7	0	0.0

3.1.1.2 1972 Vehicles Meeting 1972 Federal Standards - Data relative to the 1972 model-year vehicles at each site meeting 1972 Federal emissions standards are shown in Table 5. The three pages comprising Table 5 follow this paragraph. Data are summarized as follows:

City	1972 Vehicles Meeting 1972 Standards					
	HC		CO		BOTH	
	(No.)	(%)	(No.)	(%)	(No.)	(%)
Denver	3	10.0	2	6.7	1	3.3
Houston	3	10.0	2	6.7	1	3.3
Detroit	7	23.3	7	23.3	4	13.3

TABLE 5

1972 VEHICLES MEETING 1972 FEDERAL STANDARDS

DENVER

1972 FEDERAL TEST PROCEDURE

VEHICLE MAKE	# OF VEH.	HC <3.4 GM/MI NO.	HC <3.4 GM/MI %	CO <39 GM/MI NO.	CO <39 GM/MI %	PASSED BOTH NO.	PASSED BOTH %
BUICK	2	0	0.0	0	0.0	0	0.0
CHEVROLET	7	2	28.6	0	0.0	0	0.0
DATSUN	1	0	0.0	1	100.0	0	0.0
DODGE	2	0	0.0	0	0.0	0	0.0
FORD	6	0	0.0	0	0.0	0	0.0
LINCOLN	1	0	0.0	0	0.0	0	0.0
MERCURY	1	0	0.0	0	0.0	0	0.0
OLDSMOBILE	2	1	50.0	1	50.0	1	50.0
OPEL	1	0	0.0	0	0.0	0	0.0
PLYMOUTH	2	0	0.0	0	0.0	0	0.0
PONTIAC	2	0	0.0	0	0.0	0	0.0
TOYOTA	1	0	0.0	0	0.0	0	0.0
VOLKSWAGEN	2	0	0.0	0	0.0	0	0.0
TOTALS	30	3	10.0	2	6.7	1	3.3

TABLE 5

1972 VEHICLES MEETING 1972 FEDERAL STANDARDS

HOUSTON

1972 FEDERAL TEST PROCEDURE

VEHICLE MAKE	# OF VEH.	HC <3.4 GM/MI NO.	HC <3.4 GM/MI %	CO <39 GM/MI NO.	CO <39 GM/MI %	PASSED BOTH NO.	PASSED BOTH %
BUICK	2	1	50.0	1	50.0	1	50.0
CHEVROLET	7	2	28.6	0	0.0	0	0.0
DATSUN	1	0	0.0	1	100.0	0	0.0
DODGE	2	0	0.0	0	0.0	0	0.0
FORD	6	0	0.0	0	0.0	0	0.0
LINCOLN	1	0	0.0	0	0.0	0	0.0
MERCURY	1	0	0.0	0	0.0	0	0.0
OLDSMOBILE	2	0	0.0	0	0.0	0	0.0
OPEL	1	0	0.0	0	0.0	0	0.0
PLYMOUTH	2	0	0.0	0	0.0	0	0.0
PONTIAC	2	0	0.0	0	0.0	0	0.0
TOYOTA	1	0	0.0	0	0.0	0	0.0
VOLKSWAGEN	2	0	0.0	0	0.0	0	0.0
TOTALS	30	3	10.0	2	6.7	1	3.3

TABLE 5

1972 VEHICLES MEETING 1972 FEDERAL STANDARDS

DETROIT

1972 FEDERAL TEST PROCEDURE

VEHICLE MAKE	# OF VEH.	HC <3.4 GM/MI NO.	HC <3.4 GM/MI %	CO <39 GM/MI NO.	CO <39 GM/MI %	PASSED BOTH NO.	PASSED BOTH %
BUICK	2	0	0.0	0	0.0	0	0.0
CHEVROLET	7	3	42.9	1	14.3	1	14.3
DATSUN	1	0	0.0	0	0.0	0	0.0
DODGE	2	0	0.0	1	50.0	0	0.0
FORD	6	1	16.7	2	33.3	1	16.7
LINCOLN	1	0	0.0	0	0.0	0	0.0
MERCURY	1	1	100.0	0	0.0	0	0.0
OLDSMOBILE	2	0	0.0	1	50.0	0	0.0
OPEL	1	1	100.0	1	100.0	1	100.0
PLYMOUTH	2	0	0.0	0	0.0	0	0.0
PONTIAC	2	0	0.0	0	0.0	0	0.0
TOYOTA	1	1	100.0	1	100.0	1	100.0
VOLKSWAGEN	2	0	0.0	0	0.0	0	0.0
TOTALS	30	7	23.3	7	23.3	4	13.3

3.1.1.3 1973 Vehicles Meeting 1973 Federal Standards - Data relative to the 1973 model-year vehicles meeting 1973 Federal emission standards are shown in Table 6. The three pages comprising Table 6 follow this paragraph Data are summarized as follows:

City	1973 Vehicles Meeting 1973 Standards							
	HC		CO		NO_x		All Three	
	(No.)	(%)	(No.)	(%)	(No.)	(%)	(No.)	(%)
Denver	7	20.0	3	8.6	31	88.6	1	2.9
Houston	9	25.7	8	22.9	12	34.3	3	8.6
Detroit	9	25.7	11	31.4	7	20.0	1	2.9

TABLE 6

1973 VEHICLES MEETING 1973 FEDERAL STANDARDS

DENVER

1973 FEDERAL TEST PROCEDURE

VEHICLE MAKE	# OF VEH.	HC <3.4 GM/MI NO.	HC <3.4 GM/MI %	CO <39 GM/MI NO.	CO <39 GM/MI %	NOX <3.0 GM/MI NO.	NOX <3.0 GM/MI %	ALL THREE NO.	ALL THREE %
AMC	1	1	100.0	1	100.0	0	0.0	0	0.0
BUICK	2	1	50.0	0	0.0	2	100.0	0	0.0
CADILLAC	1	0	0.0	0	0.0	1	100.0	0	0.0
CAPRI	1	0	0.0	0	0.0	1	100.0	0	0.0
CHEVROLET	8	1	12.5	0	0.0	8	100.0	0	0.0
CHRYSLER	1	0	0.0	0	0.0	1	100.0	0	0.0
DATSUN	1	1	100.0	0	0.0	1	100.0	0	0.0
DODGE	2	0	0.0	0	0.0	2	100.0	0	0.0
FORD	7	0	0.0	0	0.0	7	100.0	0	0.0
MAZDA	1	0	0.0	1	100.0	1	100.0	0	0.0
MERCURY	1	0	0.0	0	0.0	1	100.0	0	0.0
OLDSMOBILE	2	2	100.0	1	50.0	2	100.0	1	50.0
PLYMOUTH	2	0	0.0	0	0.0	2	100.0	0	0.0
PONTIAC	2	0	0.0	0	0.0	1	50.0	0	0.0
TOYOTA	1	0	0.0	0	0.0	0	0.0	0	0.0
VOLKSWAGEN	2	1	50.0	0	0.0	1	50.0	0	0.0
TOTALS	35	7	20.0	3	8.6	31	88.6	1	2.9

TABLE 6

1973 VEHICLES MEETING 1973 FEDERAL STANDARDS

HOUSTON

1973 FEDERAL TEST PROCEDURE

VEHICLE MAKE	# OF VEH.	HC <3.4 GM/MI NO.	HC <3.4 GM/MI %	CO <39 GM/MI NO.	CO <39 GM/MI %	NOX <3.0 GM/MI NO.	NOX <3.0 GM/MI %	ALL THREE NO.	ALL THREE %
AMC	1	0	0.0	0	0.0	1	100.0	0	0.0
BUICK	2	0	0.0	1	50.0	0	0.0	0	0.0
CADILLAC	1	1	100.0	0	0.0	0	0.0	0	0.0
CAPRI	1	1	100.0	0	0.0	0	0.0	0	0.0
CHEVROLET	8	5	62.5	4	50.0	4	50.0	2	25.0
CHRYSLER	1	0	0.0	0	0.0	0	0.0	0	0.0
DATSUN	1	0	0.0	0	0.0	0	0.0	0	0.0
DODGE	2	0	0.0	0	0.0	1	50.0	0	0.0
FORD	7	1	14.3	0	0.0	2	28.6	0	0.0
MAZDA	1	0	0.0	1	100.0	1	100.0	0	0.0
MERCURY	1	0	0.0	1	100.0	0	0.0	0	0.0
OLDSMOBILE	2	1	50.0	1	50.0	1	50.0	1	50.0
PLYMOUTH	2	0	0.0	0	0.0	1	50.0	0	0.0
PONTIAC	2	0	0.0	0	0.0	0	0.0	0	0.0
TOYOTA	1	0	0.0	0	0.0	0	0.0	0	0.0
VOLKSWAGEN	2	0	0.0	0	0.0	1	50.0	0	0.0
TOTALS	35	9	25.7	8	22.9	12	34.3	3	8.6

AUTOMOTIVE TESTING LABORATORIES, INC.
19900 E. COLFAX, AURORA, COLO. 80011

TABLE 6

1973 VEHICLES MEETING 1973 FEDERAL STANDARDS

DETROIT

1973 FEDERAL TEST PROCEDURE

VEHICLE MAKE	# OF VEH.	HC <3.4 GM/MI NO.	%	CO <39 GM/MI NO.	%	NOX <3.0 GM/MI NO.	%	ALL THREE NO.	%
AMC	1	1	100.0	1	100.0	0	0.0	0	0.0
BUICK	2	1	50.0	0	0.0	0	0.0	0	0.0
CADILLAC	1	0	0.0	0	0.0	0	0.0	0	0.0
CAPRI	1	0	0.0	1	100.0	0	0.0	0	0.0
CHEVROLET	8	4	50.0	3	37.5	4	50.0	1	12.5
CHRYSLER	1	0	0.0	0	0.0	0	0.0	0	0.0
DATSUN	1	0	0.0	0	0.0	0	0.0	0	0.0
DODGE	2	1	50.0	1	50.0	0	0.0	0	0.0
FORD	7	0	0.0	1	14.3	2	28.6	0	0.0
MAZDA	1	0	0.0	1	100.0	1	100.0	0	0.0
MERCURY	1	0	0.0	0	0.0	0	0.0	0	0.0
OLDSMOBILE	2	0	0.0	2	100.0	0	0.0	0	0.0
PLYMOUTH	2	0	0.0	0	0.0	0	0.0	0	0.0
PONTIAC	2	0	0.0	0	0.0	0	0.0	0	0.0
TOYOTA	1	1	100.0	0	0.0	0	0.0	0	0.0
VOLKSWAGEN	2	1	50.0	1	50.0	0	0.0	0	0.0
TOTALS	35	9	25.7	11	31.4	7	20.0	1	2.9

3.1.1.4 1974 Vehicles Meeting 1974 Federal Standards - Data relative to the 1974 model-year vehicles meeting 1974 Federal emission standards are shown in Table 7. The three pages comprising Table 7 follow this paragraph. Data are summarized as follows:

City	1974 Vehicles Meeting 1974 Standards							
	HC		CO		NO_x		All Three	
	(No.)	(%)	(No.)	(%)	(No.)	(%)	(No.)	(%)
Denver	0	0.0	0	0.0	9	90.0	0	0.0
Houston	4	40.0	5	50.0	5	50.0	3	30.0
Detroit	4	40.0	5	50.0	5	50.0	2	20.0

TABLE 7

1974 VEHICLES MEETING 1974 FEDERAL STANDARDS

DENVER

1974 FEDERAL TEST PROCEDURE

VEHICLE MAKE	# OF VEH.	HC <3.4 GM/MI NO.	HC <3.4 GM/MI %	CO <39 GM/MI NO.	CO <39 GM/MI %	NOX <3.0 GM/MI NO.	NOX <3.0 GM/MI %	ALL THREE NO.	ALL THREE %
BUICK	1	0	0.0	0	0.0	1	100.0	0	0.0
CHEVROLET	2	0	0.0	0	0.0	2	100.0	0	0.0
DODGE	1	0	0.0	0	0.0	1	100.0	0	0.0
FORD	2	0	0.0	0	0.0	2	100.0	0	0.0
OLDSMOBILE	1	0	0.0	0	0.0	1	100.0	0	0.0
PLYMOUTH	1	0	0.0	0	0.0	1	100.0	0	0.0
PONTIAC	1	0	0.0	0	0.0	0	0.0	0	0.0
VOLKSWAGEN	1	0	0.0	0	0.0	1	100.0	0	0.0
TOTALS	10	0	0.0	0	0.0	9	90.0	0	0.0

TABLE 7

1974 VEHICLES MEETING 1974 FEDERAL STANDARDS

HOUSTON

1974 FEDERAL TEST PROCEDURE

VEHICLE MAKE	# OF VEH.	HC <3.4 GM/MI NO.	HC <3.4 GM/MI %	CO <39 GM/MI NO.	CO <39 GM/MI %	NOX <3.0 GM/MI NO.	NOX <3.0 GM/MI %	ALL THREE NO.	ALL THREE %
BUICK	1	0	0.0	1	100.0	1	100.0	0	0.0
CHEVROLET	2	1	50.0	1	50.0	2	100.0	1	50.0
DODGE	1	0	0.0	0	0.0	0	0.0	0	0.0
FORD	2	1	50.0	1	50.0	1	50.0	1	50.0
OLDSMOBILE	1	1	100.0	1	100.0	1	100.0	1	100.0
PLYMOUTH	1	0	0.0	0	0.0	0	0.0	0	0.0
PONTIAC	1	0	0.0	0	0.0	0	0.0	0	0.0
VOLKSWAGEN	1	1	100.0	1	100.0	0	0.0	0	0.0
TOTALS	10	4	40.0	5	50.0	5	50.0	3	30.0

TABLE 7

1974 VEHICLES MEETING 1974 FEDERAL STANDARDS

DETROIT

1974 FEDERAL TEST PROCEDURE

VEHICLE MAKE	# OF VEH.	HC <3.4 GM/MI NO.	HC <3.4 GM/MI %	CO <39 GM/MI NO.	CO <39 GM/MI %	NOX <3.0 GM/MI NO.	NOX <3.0 GM/MI %	ALL THREE NO.	ALL THREE %
BUICK	1	1	100.0	1	100.0	1	100.0	1	100.0
CHEVROLET	2	2	100.0	2	100.0	1	50.0	1	50.0
DODGE	1	0	0.0	0	0.0	1	100.0	0	0.0
FORD	2	0	0.0	0	0.0	0	0.0	0	0.0
OLDSMOBILE	1	1	100.0	1	100.0	0	0.0	0	0.0
PLYMOUTH	1	0	0.0	0	0.0	1	100.0	0	0.0
PONTIAC	1	0	0.0	1	100.0	0	0.0	0	0.0
VOLKSWAGEN	1	0	0.0	0	0.0	1	100.0	0	0.0
TOTALS	10	4	40.0	5	50.0	5	50.0	2	20.0

3.1.2 Modal Emissions

Mean modal emissions and fuel economy data developed by the SDS and steady state test procedures are presented in the nine pages of tables which follow. Data from the 1972, 1973 and 1974 model-year vehicles tested at each site are shown respectively in Tables 8, 9, and 10.

Data indicate generally higher HC, CO, CO_2 and NO_x emissions during the acceleration modes.

Steady state data indicate a general lowering of HC and CO emissions on a grams/mile basis as speeds are increased. NO_x emissions tend to increase with increasing speed. From the points measured, best fuel economy appears at about 30 miles per hour.

TABLE 8

SUMMARY OF MODAL EMISSIONS RESULTS ON THIRTY 1972 MODEL-YEAR VEHICLES IN DENVER

MODE NO.	FROM-TO (MPH)	DISTANCE (MILES)	TIME (SEC)	HC	CO	CO2	NOX	FUEL ECON
1	00-30	0.0602	12	6.89	130.8	502.8	3.12	12.15
2	30-00	0.0741	16	6.12	116.1	513.5	2.57	12.41
3	00-15	0.0201	8	9.77	185.6	810.7	2.87	7.83
4	15-30	0.0705	1[illegible]	4.45	89.2	489.2	3.30	13.79
5	30-45	0.1360	13	3.67	76.0	423.3	4.35	16.01
6	45-30	0.1268	12	3.35	58.4	349.2	3.06	19.65
7	30-60	0.2163	17	5.16	143.6	412.6	3.2[illegible]	13.56
8	60-45	0.1716	12	4.18	97.6	365.4	3.56	16.68
9	45-60	0.2043	14	4.42	103.2	387.5	4.53	15.74
10	60-15	0.3567	30	4.40	74.6	379.8	4.03	17.57
11	15-60	0.3136	26	6.15	196.2	430.[illegible]	2.97	1[illegible].71
12	60-00	0.1973	21	5.79	1[illegible]7.2	4[illegible]7.9	4.54	13.65
13	00-60	0.3513	32	7.26	203.[illegible]	479.2	3.77	10.80
14	60-30	0.2944	23	4.49	91.0	337.0	3.28	17.96
15	30-15	0.0579	9	6.31	87.1	35[illegible].7	1.90	17.31
16	15-00	0.0173	8	14.7[illegible]	2[illegible].8	729.9	2.37	7.8[illegible]
17	00-45	0.1759	2[illegible]	6.17	151.5	41[illegible].8	3.30	13.20
18	45-15	0.1392	16	4.99	1[illegible]0.9	39[illegible].4	[illegible].83	15.21
19	15-45	0.1528	18	5.67	120.3	382.3	[illegible].6[illegible]	14.83
20	45-00	0.1304	1[illegible]	6.12	132.8	455.6	[illegible].02	12.96
21	00-60	0.2654	25	7.53	2[illegible]8.9	551.7	[illegible].77	10.63
22	60-00	0.2634	28	6.49	137.5	425.[illegible]	[illegible]	13.40
23	00-30	0.0737	15	8.75	160.5	618.[illegible]	4.[illegible]	9.8[illegible]
24	30-60	0.3134	25	5.07	137.3	403.2	3.61	13.98
25	60-30	0.2362	18	4.57	92.7	344.[illegible]	3.23	17.40
26	30-00	0.04[illegible]	10	9.33	132.6	519.3	[illegible].73	11.72
27	00-60	0.4009	38	6.41	183.5	435.6	3.04	1[illegible].77
28	60-00	0.3293	35	5.60	103.5	384.6	3.21	15.71
29	00-30	0.0836	18	8.11	150.9	570.9	3.56	10.65
30	30-60	0.259[illegible]	21	5.64	171.0	410.8	3.15	12.73
31	60-30	0.1813	14	4.84	115.2	363.5	3.16	15.71
32	30-00	0.0592	13	10.33	148.8	525.6	2.94	11.19
TOTAL CALCULATED RESULTS				4.51	101.8	401.[illegible]	3.81	15.42
BAG RESULTS				5.[illegible]	142.3	436.0	3.44	13.1[illegible]
33	IDLE			0.84	19.0	70.1	0.08	[illegible]
34	5 MPH	STEADY STATE		8.38	20[illegible].8	876.9	[illegible]	7.29
35	10 MPH	STEADY STATE		4.04	101.9	580.3	[illegible].6[illegible]	1[illegible].78
36	15 MPH	STEADY STATE		2.80	69.3	431.8	3.70	16.15
37	30 MPH	STEADY STATE		2.08	34.[illegible]	317.8	1.91	23.49
38	45 MPH	STEADY STATE		2.41	40.0	319.3	4.22	22.80
39	60 MPH	STEADY STATE		2.6[illegible]	[illegible].1	[illegible]	[illegible]	19.54

EMISSION RESULTS IN GRAMS PER MILE (PER [illegible] FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON [illegible] FOR IDLE)
FUEL ECONOMY CALCULATIONS ASSUME A 1:[illegible] CARBON/HYDROGEN RATIO

TABLE 8

SUMMARY OF MODAL EMISSIONS RESULTS ON THIRTY 1972 MODEL-YEAR VEHICLES IN HOUSTON

MODE NO.	FROM-TO (MPH)	DISTANCE (MILES)	TIME (SEC)	HC	CO	CO2	NOX	FUEL ECON
1	00-30	0.0602	12	5.83	80.9	689.1	7.27	10.63
2	30-00	0.0741	16	5.13	62.7	671.2	4.70	11.29
3	00-15	0.0201	8	8.8	110.0	969.0	5.3[illegible]	7.59
4	15-30	0.0705	11	3.84	50.7	602.5	5.71	12.78
5	30-45	0.1360	13	2.84	28.1	534.3	8.16	15.11
6	45-30	0.1268	12	2.48	22.6	458.3	5.61	17.69
7	30-60	0.2163	17	3.26	60.6	526.9	7.68	14.03
8	60-45	0.1716	12	3.10	62.6	501.4	6.40	14.56
9	45-60	0.2043	14	3.09	40.5	510.1	9.10	15.21
10	60-15	0.3367	30	3.18	34.3	509.9	6.83	15.46
11	15-60	0.3136	26	3.94	81.9	579.2	8.25	12.32
12	60-00	0.1973	21	4.01	58.0	659.7	8.27	11.62
13	00-60	0.3313	32	4.35	79.4	650.6	10.[illegible]	11.25
14	60-30	0.2904	23	3.07	42.1	484.2	6.41	15.85
15	30-15	0.0579	9	5.02	52.4	517.5	3.74	14.41
16	15-00	0.0173	8	11.91	153.3	104[illegible].4	4.30	6.71
17	00-45	0.1759	2[illegible]	3.96	69.6	540.2	7.64	13.40
18	45-15	0.1392	16	3.41	41.7	573.6	5.90	13.66
19	15-45	0.1528	18	3.68	57.7	493.5	6.36	14.90
20	45-00	0.1304	19	4.16	54.2	675.7	6.62	11.47
21	00-60	0.2654	25	4.29	115.3	580.3	6.84	11.45
22	60-00	0.2634	28	4.39	76.7	594.9	6.74	12.17
23	00-30	0.0737	15	6.55	93.7	747.0	7.89	9.70
24	30-60	0.3134	25	3.04	47.1	537.0	8.49	14.30
25	60-30	0.2362	18	2.93	41.2	480.8	6.35	16.00
26	30-00	0.04[illegible]	10	7.21	76.5	705.2	5.23	10.46
27	00-60	0.40[illegible]9	38	3.77	68.4	609.7	9.51	12.17
28	60-00	0.3293	35	3.84	43.2	507.5	6.12	15.11
29	00-30	0.0836	18	6.07	85.0	707.1	7.26	10.32
30	30-60	0.259[illegible]	21	3.12	58.5	549.0	8.28	13.64
31	60-30	0.1813	14	3.13	53.8	515.0	6.58	14.56
32	30-00	0.0592	13	7.22	83.1	696.1	5.09	10.45
TOTAL CALCULATED RESULTS				3.21	48.0	538.7	6.96	14.22
BAG RESULTS				3.59	62.8	592.7	7.15	12.63
33	IDLE			1.05	20.2	120.0	0.92	57.20
34	5 MPH	STEADY STATE		8.36	19[illegible].8	12[illegible]9.0	1.6[illegible]	5.6
35	10 MPH	STEADY STATE		7.66	94.5	76[illegible].5	1.17	9.45
36	15 MPH	STEADY STATE		3.69	5[illegible].8	538.4	0.68	13.92
37	30 MPH	STEADY STATE		1.80	19.8	435.9	2.19	18.77
38	45 MPH	STEADY STATE		1.63	21.9	404.4	5.63	19.9[illegible]
39	60 MPH	STEADY STATE		1.95	20.8	473.9	8.71	17.31

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON(MINUTES PER GALLON FOR IDLE)
FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO

TABLE 8

SUMMARY OF MODAL EMISSIONS RESULTS ON THIRTY 1972 MODEL-YEAR VEHICLES IN DETROIT

MODE NO.	FROM-TO (MPH)	DISTANCE (MILES)	TIME (SEC)	HC	CO	CO2	NOX	FUEL ECON
1	00-30	0.0602	12	5.38	78.6	479.4	3.65	14.32
2	30-00	0.0741	16	5.44	67.2	629.0	3.96	11.80
3	00-15	0.0201	8	9.67	125.8	905.5	4.19	7.83
4	15-30	0.0705	11	4.01	51.7	535.2	3.83	14.1[illegible]
5	30-45	0.1360	13	2.83	30.8	474.3	5.54	16.69
6	45-30	0.1268	12	2.76	28.3	435.1	4.61	18.17
7	30-60	0.2163	17	3.56	5[illegible].3	467.7	5.46	15.2[illegible]
8	60-45	0.1716	12	3.24	60.5	463.9	5.40	15.58
9	45-60	0.2043	14	3.40	43.5	470.1	6.73	16.16
10	60-15	0.3367	30	3.80	40.8	49[illegible].6	6.46	15.41
11	15-60	0.3136	26	4.17	75.3	525.3	6.41	13.51
12	60-00	0.1973	21	4.80	63.4	621.5	7.5[illegible]	12.05
13	00-60	0.3313	32	5.17	86.6	59[illegible].7	7.60	11.80
14	60-30	0.29[illegible]4	23	3.61	49.6	461.6	5.[illegible]2	16.1[illegible]
15	30-15	0.0579	9	6.15	58.2	50[illegible].6	3.56	14.40
16	15-00	0.0173	8	14.38	158.1	1[illegible]45.2	4.82	6.53
17	00-45	0.1759	22	4.84	74.5	518.5	5.78	13.63
18	45-15	0.1392	16	4.[illegible]	51.9	[illegible]18.7	5.21	14.48
19	15-45	0.1528	18	4.30	59.7	501.6	5.39	14.57
20	45-00	0.1304	19	5.04	64.6	610.6	5.[illegible]3	12.19
21	00-60	0.2654	25	5.63	137.2	562.9	5.27	11.15
22	60-00	0.2634	28	5.41	89.4	573.3	5.95	12.14
23	00-30	0.0737	15	8.70	114.3	752.8	6.97	9.24
24	30-60	0.31[illegible]4	25	3.48	51.6	48[illegible].8	6.53	15.38
25	60-30	0.2362	18	3.38	45.8	463.3	6.0[illegible]	16.25
26	30-00	0.0446	10	8.70	79.7	725.0	5.53	10.1[illegible]
27	00-60	0.4009	38	4.61	78.9	5[illegible]0.9	7.21	12.87
28	60-00	0.3293	35	4.55	5[illegible].5	520.4	6.14	14.12
29	00-30	0.0886	18	7.96	97.7	702.3	5.63	10.07
30	30-60	0.259[illegible]	21	3.[illegible]	61.4	493.5	6.51	14.75
31	60-30	0.1813	14	3.61	57.5	472.4	5.94	15.46
32	30-00	0.0592	13	8.[illegible]	96.6	731.4	5.69	9.7[illegible]
TOTAL CALCULATED RESULT				3.[illegible]2	50.8	502.7	5.8[illegible]	14.94
BAG RESULTS				4.[illegible]	68.5	542.9	5.97	13.56
33	IDLE			0.93	16.6	77.6	0.13	83.21
34	5 MPH	STEADY STATE		10.82	183.7	10[illegible]6.1	1.40	6.[illegible]
35	10 MPH	STEADY STATE		4.95	7[illegible].3	68[illegible].7	0.73	10.[illegible]
36	15 MPH	STEADY STATE		3.05	43.0	53[illegible].6	0.83	14.53
37	30 MPH	STEADY STATE		1.89	16.0	385.4	2.13	21.30
38	45 MPH	STEADY STATE		2.01	20.3	406.3	4.93	19.97
39	60 MPH	STEADY STATE		2.07	2[illegible].6	45[illegible].0	8.03	17.85

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON(MINUTES PER GALLON FOR IDLE)
FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO

TABLE 9

SUMMARY OF MODAL EMISSIONS RESULTS ON THIRTY-FIVE 1973 MODEL-YEAR VEHICLES IN DENVER

MODE NO.	FROM-TO (MPH)	DISTANCE (MILES)	TIME (SEC)	HC	CO	CO2	NOX	FUEL ECON
1	00-30	0.0602	12	7.10	164.8	665.2	3.13	9.38
2	30-00	0.0741	16	4.41	88.4	391.0	1.04	16.32
3	00-15	0.0201	8	7.71	169.9	907.3	2.16	7.40
4	15-30	0.0705	11	3.95	89.1	576.5	2.68	12.17
5	30-45	0.1360	13	3.47	78.5	483.6	3.59	14.36
6	45-30	0.1268	12	2.75	42.5	258.1	0.90	26.61
7	30-60	0.2163	17	5.61	206.4	547.5	3.03	9.98
8	60-45	0.1716	12	3.78	64.7	288.2	1.40	22.08
9	45-60	0.2043	14	4.40	130.6	480.7	3.50	12.68
10	60-15	0.3067	30	3.27	52.3	310.0	1.63	22.05
11	15-60	0.3136	26	6.47	226.1	553.1	3.12	9.55
12	60-00	0.1973	21	4.47	76.8	348.7	1.79	18.35
13	00-60	0.3013	32	7.50	216.5	587.0	3.49	9.33
14	60-30	0.2904	23	3.36	56.3	284.2	1.40	23.15
15	30-15	0.0579	9	3.81	58.8	315.1	0.81	21.15
16	15-00	0.0173	8	9.20	152.8	733.5	1.08	8.85
17	00-45	0.1759	28	6.81	189.3	580.6	3.26	9.86
18	45-15	0.1392	16	3.30	70.6	317.2	1.10	20.24
19	15-45	0.1528	18	6.42	146.0	517.7	2.76	11.56
20	45-00	0.1304	19	4.05	81.8	367.9	1.23	17.43
21	00-60	0.2654	25	8.80	271.0	602.1	3.25	8.41
22	60-00	0.2634	28	4.29	76.8	332.6	1.54	19.01
23	00-30	0.0737	15	7.13	148.0	732.0	3.42	8.98
24	30-60	0.3134	25	5.53	147.4	488.9	3.12	12.03
25	60-30	0.2362	18	3.41	57.9	276.8	1.43	23.42
26	30-00	0.0440	10	5.41	88.7	442.0	1.08	14.83
27	00-60	0.4099	38	6.52	188.0	539.0	3.18	10.38
28	60-00	0.3293	35	3.84	65.5	311.3	1.38	20.82
29	00-30	0.0806	18	6.90	142.7	688.6	2.92	9.49
30	30-60	0.2590	21	6.13	197.2	516.8	2.96	10.49
31	60-30	0.1813	14	3.70	69.7	283.0	1.46	21.95
32	30-00	0.0592	13	5.78	97.0	422.9	1.12	14.95
TOTAL CALCULATED RESULTS				4.04	95.8	425.9	2.45	15.06
BAG RESULTS				4.49	119.0	453.9	2.23	13.53
33	IDLE			0.79	15.2	70.8	0.07	91.37
34	5 MPH	STEADY STATE		7.97	156.0	836.2	0.72	8.02
35	10 MPH	STEADY STATE		3.73	78.6	542.6	0.59	13.09
36	15 MPH	STEADY STATE		2.43	55.4	426.9	0.52	17.02
37	30 MPH	STEADY STATE		1.89	34.8	329.9	1.02	22.72
38	45 MPH	STEADY STATE		1.86	32.7	354.6	2.40	21.54
39	60 MPH	STEADY STATE		2.30	47.1	394.7	3.64	18.64

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON(MINUTES PER GALLON FOR IDLE)
FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO

TABLE 9

SUMMARY OF MODAL EMISSIONS RESULTS ON THIRTY-FIVE 1973 MODEL-YEAR VEHICLES IN HOUSTON

MODE NO.	FROM-TO (MPH)	DISTANCE (MILES)	TIME (SEC)	HC	CO	CO2	NOX	FUEL ECON
1	00-30	0.0602	12	6.19	73.4	671.8	4.85	11.00
2	30-00	0.0741	16	6.07	67.0	702.5	3.10	10.73
3	00-15	0.0201	8	9.91	105.2	981.0	2.7[illegible]	7.54
4	15-30	0.0705	1[illegible]	4.17	46.9	594.3	[illegible]	13.03
5	30-45	0.1360	13	2.72	28.2	520.6	[illegible]	15.48
6	45-30	0.1268	12	2.60	25.0	476.7	5.41	16.93
7	30-60	0.2163	17	3.05	64.1	508.7	[illegible]	14.36
8	60-45	0.1716	12	3.15	56.3	528.3	4.32	14.25
9	45-60	0.2043	14	3.01	44.9	496.5	6.02	15.35
10	60-15	0.3367	30	2.91	32.2	539.1	4.55	14.82
11	15-60	0.3136	26	3.51	82.7	5[illegible]1.1	[illegible]	[illegible]
12	60-00	0.1973	21	3.72	56.2	680.0	5.8[illegible]	1[illegible].38
13	00-60	0.3313	32	4.16	83.6	626.8	7.20	[illegible]
14	60-30	0.29[illegible]4	23	2.65	39.8	504.8	[illegible]	[illegible]
15	30-15	0.0579	9	4.98	48.0	526.1	2.40	14.38
16	15-00	0.0173	8	12.10	13[illegible].7	1152.6	5.02	[illegible]
17	00-45	0.1759	2[illegible]	3.71	63.0	[illegible]	5.41	[illegible]
18	45-15	0.1392	16	3.19	42.8	563.7	3.73	[illegible]
19	15-45	0.1528	18	3.39	52.5	[illegible]	4.07	[illegible]
20	45-00	0.1304	19	4.10	56.6	[illegible]	4.19	[illegible]
21	00-60	0.2654	25	4.01	116.0	547.1	5.1[illegible]	[illegible]
22	60-00	0.2634	28	3.84	73.3	[illegible]	4.2[illegible]	1[illegible]
23	00-30	0.0737	15	6.26	84.6	71[illegible]	5.12	[illegible]
24	30-60	0.3134	25	2.73	48.3	512.6	5.82	[illegible]
25	60-30	0.2362	18	2.43	36.0	492.7	4.41	[illegible]
26	30-00	0.04[illegible]	10	6.61	71.1	723.5	3.46	10.37
27	00-60	0.4[illegible]9	38	3.40	70.2	56[illegible].7	6.34	12.[illegible]
28	60-00	0.3293	35	3.09	39.5	520.[illegible]	4.24	14.[illegible]
29	00-30	0.08[illegible]	18	5.[illegible]	73.7	[illegible]	4.81	[illegible]
30	30-60	[illegible].259	21	2.79	54.9	515.6	5.0	14.55
31	60-30	0.1813	14	2.63	50.0	531.[illegible]	4.[illegible]1	14.36
32	30-00	0.0592	13	6.64	80.0	729.8	3.96	10.13
TOTAL CALCULATED RESULTS				2.82	45.3	529.[illegible]	4.58	14.57
BAG RESULTS				3.20	62.0	587.1	4.82	12.78
33	IDLE			1.15	18.9	1[illegible]6.7	0.24	59.15
34	5 MPH	STEADY STATE		7.66	177.7	125[illegible].0	1.18	5.69
35	10 MPH	STEADY STATE		4.20	84.7	784.6	0.83	9.53
36	15 MPH	STEADY STATE		2.14	49.3	54[illegible].6	0.48	14.12
37	30 MPH	STEADY STATE		1.53	18.8	41[illegible].4	1.48	19.91
38	45 MPH	STEADY STATE		1.25	15.7	405.7	3.04	20.43
39	60 MPH	STEADY STATE		1.30	16.3	450.4	5.63	18.48

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON(MINUTES PER GALLON FOR IDLE)
FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO

TABLE 9

SUMMARY OF MODAL EMISSIONS RESULTS ON
THIRTY-FIVE 1973 MODEL-YEAR VEHICLES IN DETROIT

MODE NO.	FROM-TO (MPH)	DISTANCE (MILES)	TIME (SEC)	HC	CO	CO2	NOX	FUEL ECON
1	0 -30	0.0602	12	4.28	64.3	487.1	3.59	14.75
2	30-0	0.0741	16	3.97	57.1	656.9	3.45	11.69
3	0 -15	0.0211	8	6.96	105.0	947.7	3.8	7.81
4	15-30	0.0705	11	2.89	41.6	530.3	3.21	14.67
5	30-45	0.1360	13	1.95	[illegible]	465.2	4.68	17.46
6	45-30	0.1268	12	1.85	16.2	452.8	3.47	18.72
7	30-60	0.2163	17	2.64	59.5	483.0	5.08	15.17
8	60-45	0.1716	12	2.28	33.9	483.9	4.65	15.85
9	45-60	0.2043	14	2.35	33.8	479.1	5.84	16.45
10	60-15	0.3367	30	2.47	24.7	523.8	5.30	15.56
11	15-60	0.3136	26	3.15	72.2	531.7	6.00	13.55
12	30-0	0.1973	21	3.25	43.1	646.2	6.51	12.26
13	0 -60	0.3513	32	3.52	74.6	616.6	7.02	12.91
14	60-30	0.2964	23	2.35	33.1	484.6	4.81	16.31
15	30-15	0.0579	9	3.90	37.0	539.4	3.06	14.56
16	15-0	0.0173	8	9.02	134.8	1084.2	3.87	6.86
17	0 -45	0.1759	28	3.20	62.9	523.6	5.08	14.03
18	45-15	0.1392	16	2.67	34.4	546.3	4.15	14.58
19	15-45	0.1528	18	2.92	47.8	497.2	4.81	15.26
20	45-0	0.1304	19	3.39	42.0	644.2	4.87	12.31
21	0 -60	0.2654	25	3.82	109.7	570.9	5.18	11.51
22	60-0	0.2634	28	3.76	63.4	597.9	4.94	12.51
23	0 -30	0.0737	15	5.85	81.2	776.6	5.90	9.62
24	30-60	0.3134	25	2.32	38.1	494.9	5.95	15.79
25	60-30	0.2362	18	2.18	27.0	478.7	4.84	16.81
26	30-0	0.044[illegible]	10	5.67	55.2	750.4	4.40	10.38
27	0 -60	0.4019	38	2.9[illegible]	62.6	569.8	6.60	13.10
28	60-0	0.3293	35	2.94	32.4	546.9	5.04	14.62
29	0 -30	0.0836	18	4.97	69.1	717.0	5.45	10.55
30	30-60	0.2595	21	2.43	49.3	513.6	6.10	14.82
31	60-30	0.1813	14	2.30	37.4	503.8	4.75	15.57
32	30-0	0.0592	13	5.71	65.9	774.4	4.65	9.91
TOTAL CALCULATED RESULTS				2.4[illegible]	36.9	519.0	5.20	15.18
BAG RESULTS				2.95	52.4	560.1	5.21	13.62
33	IDLE			0.69	12.2	85.5	0.13	83.06
34	5 MPH	STEADY STATE		7.02	137.9	1089.5	1.09	6.08
35	10 MPH	STEADY STATE		2.85	62.7	700.7	0.61	10.98
36	15 MPH	STEADY STATE		1.85	36.0	530.3	0.61	14.97
37	30 MPH	STEADY STATE		1.41	14.1	396.5	1.95	20.98
38	45 MPH	STEADY STATE		1.25	7.3	423.4	4.15	20.23
39	60 MPH	STEADY STATE		1.33	10.1	468.0	7.33	18.18

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON(MINUTES PER GALLON FOR IDLE)
FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO

TABLE 10

SUMMARY OF MODAL EMISSIONS RESULTS ON TEN 1974 MODEL-YEAR VEHICLES IN DENVER

MODE NO.	FROM-TO (MPH)	DISTANCE (MILES)	TIME (SEC)	HC	CO	CO2	NOX	FUEL ECON
1	00-30	0.0602	12	6.36	132.6	549.5	1.87	11.41
2	30-00	0.0741	16	6.09	135.7	565.9	1.11	11.14
3	00-15	0.0201	8	9.38	163.7	919.2	1.45	7.39
4	15-30	0.0705	11	4.37	104.6	508.3	1.44	12.93
5	30-45	0.1360	13	3.56	89.0	440.4	2.29	15.06
6	45-30	0.1268	12	2.89	63.4	382.4	1.41	18.07
7	30-60	0.2163	17	4.37	146.5	453.1	2.56	12.73
8	60-45	0.1716	12	3.58	98.5	421.9	1.89	15.09
9	45-60	0.2343	14	4.03	109.5	436.7	2.65	14.28
10	60-15	0.3567	30	4.08	72.3	442.5	2.03	15.59
11	15-60	0.3136	26	5.41	193.1	470.4	2.56	11.22
12	60-00	0.1973	21	5.27	116.8	574.4	2.35	11.46
13	00-60	0.3313	32	6.24	201.2	526.0	2.74	10.30
14	60-30	0.2934	23	3.58	92.5	404.2	1.66	15.82
15	30-15	0.0579	4	5.68	81.7	427.4	0.97	15.47
16	15-00	0.0173	8	12.59	178.2	961.2	1.46	6.93
17	00-45	0.1759	2[illegible]	5.20	141.0	454.9	2.13	12.81
18	45-15	0.1392	16	4.08	114.7	465.1	1.35	13.48
19	15-45	0.1528	18	4.67	125.4	420.1	1.78	14.04
20	45-00	0.1304	19	4.83	128.5	543.8	1.45	11.67
21	00-60	0.2654	25	6.15	230.4	494.5	2.05	10.13
22	60-00	0.2634	28	4.92	129.3	492.9	1.75	12.47
23	00-30	0.0737	15	7.18	146.5	676.5	2.05	9.55
24	30-60	0.3134	25	4.10	140.3	431.7	2.39	13.34
25	60-30	0.2362	18	3.56	91.5	405.3	1.69	15.84
26	30-00	0.04[illegible]	10	7.56	120.3	620.1	1.51	10.65
27	00-60	0.4009	38	4.68	160.8	491.9	2.48	11.69
28	60-00	0.3293	35	4.07	91.7	450.3	1.85	14.61
29	00-30	0.0866	18	6.80	186.4	643.1	1.67	9.24
30	30-60	0.2599	21	4.59	167.2	413.0	2.19	12.85
31	60-30	0.1813	14	4.01	114.0	419.4	1.68	14.52
32	30-00	0.0592	13	7.6	131.6	595.1	1.41	10.74
TOTAL CALCULATED RESULTS				3.80	97.9	461.6	2.27	14.15
BAG RESULTS				4.63	138.7	481.0	1.99	12.40
33	IDLE			1.03	14.1	86.8	0.12	77.82
34	5 MPH	STEADY STATE		10.16	150.0	1079.1	0.78	6.59
35	10 MPH	STEADY STATE		4.48	79.3	584.8	0.60	12.27
36	15 MPH	STEADY STATE		2.53	59.1	470.9	0.45	15.52
37	30 MPH	STEADY STATE		1.87	32.6	360.7	1.18	21.24
38	45 MPH	STEADY STATE		1.92	33.6	390.9	2.28	19.73
39	60 MPH	STEADY STATE		2.18	47.7	439.5	3.59	17.02

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON(MINUTES PER GALLON FOR IDLE)
FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO

TABLE 10

SUMMARY OF MODAL EMISSIONS RESULTS ON TEN 1974 MODEL-YEAR VEHICLES IN HOUSTON

MODE NO.	FROM-TO (MPH)	DISTANCE (MILES)	TIME (SEC)	HC	CO	CO2	NOX	FUEL ECON
1	00-30	0.0602	12	6.01	80.1	74[illegible].7	4.54	9.98
2	30-00	0.0741	16	6.28	6[illegible].1	746.2	2.49	10.20
3	00-15	0.0201	8	9.76	12[illegible].4	1084.6	2.39	6.79
4	15-30	0.0705	11	3.97	48.3	6[illegible]3.5	2.82	11.80
5	30-45	0.1360	13	2.76	26.4	584.2	4.5[illegible]	13.9[illegible]
6	45-30	0.1268	12	2.67	17.3	517.6	2.85	16.04
7	30-60	0.2163	17	3.15	61.9	576.2	5.80	12.99
8	60-45	0.1716	12	2.68	50.5	568.0	3.80	13.53
9	45-60	0.2043	14	3.05	47.8	557.4	5.84	13.82
10	60-15	0.3367	30	3.07	29.2	574.4	3.82	14.09
11	15-60	0.3136	26	3.70	94.1	615.8	6.51	11.45
12	60-00	0.1973	21	3.91	48.9	731.1	5.15	10.82
13	00-60	0.3[illegible]13	32	4.30	93.5	682.9	7.64	10.52
14	60-30	0.29[illegible]4	23	3.65	36.7	539.0	3.78	14.59
15	30-15	0.0579	9	4.73	47.3	568.2	2.21	13.50
16	15-00	0.0173	8	11.39	15[illegible].3	1[illegible]61.8	2.75	6.15
17	00-45	0.1759	2[illegible]	3.85	76.8	601.9	5.45	12.08
18	45-15	0.1392	16	3.34	98.3	61[illegible].8	3.03	12.71
19	15-45	0.1528	18	3.48	62.5	562.1	4.75	13.22
20	45-00	0.1304	19	4.47	50.2	714.6	3.52	10.9[illegible]
21	00-60	0.2654	25	3.96	125.3	597.9	5.76	10.9[illegible]
2[illegible]	60-00	0.2634	28	4.09	65.4	6[illegible].8	4.05	11.34
23	00-30	0.0737	15	6.39	90.3	78[illegible].8	4.94	9.33
24	30-60	0.3134	25	2.93	60.4	561.8	6.08	13.33
25	60-30	0.2362	18	2.66	38.8	542.2	3.91	14.51
26	30-00	0.04[illegible]	10	7.10	75.0	793.2	3.11	9.51
27	00-60	0.4009	38	3.60	81.0	629.1	6.89	11.56
28	60-00	0.3293	35	3.50	36.7	581.1	3.71	13.66
29	00-30	0.0886	13	5.70	77.2	763.0	4.38	9.84
30	30-60	0.259[illegible]	21	3.04	71.5	56[illegible].8	5.95	12.88
31	60-30	0.1813	14	2.82	54.8	578.6	3.85	13.17
32	30-00	0.0592	13	6.48	69.4	789.4	3.37	9.66
TOTAL CALCULATED RESULTS				3.04	45.9	580.5	4.22	13.40
BAG RESULTS				3.31	[illegible]	645.5	4.62	11.65
3[illegible]	IDLE			0.9[illegible]	16.1	118.3	0.30	60.44
34	5 MPH	STEADY STATE		7.94	187.9	1250.8	0.92	5.65
35	10 MPH	STEADY STATE		3.54	100.5	792.1	0.80	9.23
36	15 MPH	STEADY STATE		2.09	60.7	62[illegible].3	0.51	12.25
37	30 MPH	STEADY STATE		1.56	21.0	435.9	1.42	18.73
38	45 MPH	STEADY STATE		2.60	9.7	467.3	2.36	18.08
39	60 MPH	STEADY STATE		1.46	11.3	502.9	4.56	16.90

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON(MINUTES PER GALLON FOR IDLE)
FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO

TABLE 10

SUMMARY OF MODAL EMISSIONS RESULTS ON TEN 1974 MODEL-YEAR VEHICLES IN DETROIT

MODE NO.	FROM-TO (MPH)	DISTANCE (MILES)	TIME (SEC)	HC	CO	CO2	NOX	FUEL ECON
1	00-30	0.0602	12	4.43	71.4	560.5	3.26	12.92
2	30-00	0.0741	16	4.27	46.2	818.5	3.46	9.81
3	00-15	0.0291	8	7.11	81.9	1102.9	3.59	7.08
4	15-30	0.0705	11	2.89	34.5	628.5	2.63	12.85
5	30-45	0.1360	13	2.01	19.6	549.2	3.81	15.27
6	45-30	0.1268	12	1.89	12.4	547.6	2.72	15.40
7	30-60	0.2163	17	2.81	73.3	560.3	3.97	12.97
8	60-45	0.1716	12	2.30	47.0	579.2	3.59	13.44
9	45-60	0.2043	14	2.67	48.7	559.8	4.28	13.70
10	60-15	0.3367	30	2.79	28.7	642.0	3.97	12.75
11	15-60	0.3136	26	3.41	97.4	611.6	4.75	11.44
12	60-00	0.1973	21	3.61	46.9	789.7	5.26	10.16
13	00-60	0.3313	32	3.8	95.7	720.3	5.76	10.35
14	60-30	0.2999	23	2.61	34.9	580.0	3.80	13.80
15	30-15	0.0579	9	4.24	34.2	635.6	2.47	12.63
16	15-00	0.0173	8	9.51	104.9	1308.7	4.45	5.96
17	00-45	0.1759	27	3.10	62.8	607.3	4.43	12.40
18	45-15	0.1392	16	2.67	32.0	659.5	2.90	12.36
19	15-45	0.1528	18	2.83	46.4	575.5	3.86	13.50
20	45-00	0.1304	19	3.37	37.3	764.3	3.80	10.65
21	00-60	0.2654	25	4.69	145.9	659.0	4.77	9.83
22	60-00	0.2634	28	4.12	71.4	735.8	4.24	10.31
23	00-30	0.0737	15	5.86	72.7	926.9	5.03	8.37
24	30-60	0.3134	25	2.48	41.9	569.2	4.92	13.80
25	60-30	0.2367	18	2.27	27.4	582.1	3.96	14.03
26	30-0	0.0411	10	5.63	46.5	917.7	4.24	8.80
27	00-60	0.4009	38	3.05	68.5	654.6	5.21	11.50
28	60-00	0.3293	35	2.85	34.5	657.3	4.09	12.32
29	00-30	0.0806	18	4.58	59.8	849.3	4.47	9.27
30	30-60	0.2599	21	2.59	64.2	583.2	4.60	12.78
31	60-30	0.1813	14	2.51	47.9	586.0	3.59	13.26
32	30-00	0.0592	13	5.64	63.7	896.5	3.70	8.75
TOTAL CALCULATED RESULTS				2.49	39.5	590.5	4.03	13.26
FTP RESULTS				2.96	55.9	641.7	4.21	12.01
33	IDLE			0.59	9.4	96.8	0.18	76.20
34	5 MPH STEADY STATE			6.17	127.4	1233.7	1.70	6.11
35	10 MPH STEADY STATE			2.51	53.6	715.4	0.73	10.99
36	15 MPH STEADY STATE			1.73	36.1	589.6	0.78	13.62
37	30 MPH STEADY STATE			1.28	10.4	435.3	1.67	19.47
38	45 MPH STEADY STATE			1.19	5.7	469.7	2.81	18.40
39	60 MPH STEADY STATE			1.25	8.8	519.9	5.15	16.51

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON(MINUTES PER GALLON FOR IDLE)
FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO

3.2 DISCUSSION OF EVAPORATIVE EMISSION TEST RESULTS.

Evaporative emission test results developed by the SHED technique and cannister procedure are presented in Table 11 (one page).

Data indicate each of the 20 vehicles tested passed the 1973 Federal Evaporative Emission Test Standard of 2 grams per test. Data further indicate average evaporative emissions for the 20 vehicles to be 32.3 grams per test by the SHED technique and 0.39 grams per test by the canister test procedure of the Federal Register.

TABLE 11

Summary of Evaporative Emission Test
Results on Twenty 1973 Model-Year Vehicles

Denver

SHED Procedure (Enclosure method)

Diurnal Soak	Time (minutes)	60	
	Enclosure temperature (°F)	73.1	
	Internal temperature (°F)	84.1	
	HC (GMS)	15.8	
Hot Soak:	Time (minutes)	60	
	Enclosure temperature (°F)	84.1	
	Internal temperature (°F)	97.1	
	HC (GMS)	16.5	
TOTAL grams of evaporated HC emissions			32.3

Federal Test Procedure (Canister method)

Diurnal Soak:	Time (minutes)	60	
	Soak temperature (°F)	79.9	
	Internal temperature (°F)	84.3	
Hot Soak:	Time (minutes)	60	
	Soak temperature (°F)	79.8	
	Internal temperature (°F)	93.6	
TOTAL grams of evaporated HC emissions			0.39
Number of vehicles which met 1973 Federal Standards (2 gms)			20
Percent total tested			100%

Fuel Inspection Results (Average)

RVP	7.96
HC ratio	2.24
Fuel distillation temperatures (°F)	
IBP	91.1
5%	134.4
10%	149.3
15%	162.0
20%	173.3
30%	192.9
40%	208.0
50%	221.4
90%	332.1
EBP	335.2

3.3 DISCUSSION OF FEDERAL TEST PROCEDURE REPLICATE TESTING

Replicate tests were performed on each of the twenty (20) 1973 model-year vehicles tested for evaporative emissions in Denver. These results are summarized on the one page Table 12 following this paragraph.

The object was to determine that the tests were repeatable and, therefore, meaningful. The paired "T" test was applied to test for differences between the first and second test. T scores indicate at a 95 percent confidence level there was no discernable difference between HC, CO, NO_x and fuel economy for the two tests.

TABLE 12

Summary of Results of Replicate Testing on Twenty 1973 Model-Year Vehicles

Denver

1972 Federal Test Procedure

	No. of Vehicles	HC Mean	HC S.D.	CO Mean	CO S.D.	NO_{xc} Mean	NO_{xc} S.D.	Fuel Econ. Mean	Fuel Econ. S.D.
First Test	20	4.64	1.96	81.0	36.0	2.07	1.04	14.16	4.87
Second Test	20	4.59	1.89	77.7	34.3	2.11	1.06	14.42	4.63
Between Tests (Paired T)	20	-0.05	0.56	-3.3	10.3	-0.05	0.19	0.27	1.96

1975 Federal Test Procedure

	No. of Vehicles	HC Mean	HC S.D.	CO Mean	CO S.D.	NO_{xc} Mean	NO_{xc} S.D.	Fuel Econ. Mean	Fuel Econ. S.D.
First Test	20	4.22	1.91	71.2	35.9	2.03	0.96	15.00	5.10
Second Test	20	4.16	1.83	68.5	33.0	2.07	0.98	15.32	4.95
Between Tests (Paired T)	20	-0.06	0.43	-2.6	10.4	0.04	0.21	0.32	1.13

3.4 DISCUSSION OF AIR CONDITIONED VEHICLE EMISSION TEST RESULTS.

Data relative to the air conditioned vehicle emissions tasks are presented in Table 13. The one page comprising Table 13 follows this paragraph.

Data indicate HC, CO, CO_2 and NO_x emissions to be generally higher from vehicles tested with the air conditioning system operating as opposed to the additional 10 percent simulated A/C load of the Federal Register.

The following key is provided:

Test	A/C	A/C Simulation
1st (part of original test)	off	on
2nd	on	off
3rd	off	off
4th	off	on

TABLE 13

SUMMARY OF AIR CONDITIONED VEHICLE TESTS VS. MODEL YEAR IN HOUSTON AND DETROIT

HOT START TEST PROCEDURE

MODEL YEAR	# OF VEH.	A/C SIM	A/C	HC	CO	CO2	NOXC	FUEL ECON
1967	5	ON	OFF	7.11	124.5	570.6	3.82	11.25
		OFF	ON	7.03	124.5	565.9	3.66	11.32
		OFF	OFF	6.80	117.8	551.0	3.61	11.70
		ON	OFF	6.70	116.2	554.1	3.63	11.69
1969	8	ON	OFF	4.28	70.9	647.9	6.48	11.35
		OFF	ON	4.60	86.0	666.4	6.60	10.77
		OFF	OFF	4.16	72.8	633.2	6.18	11.52
		ON	OFF	4.22	72.6	620.0	6.12	11.72
1971	9	ON	OFF	3.67	54.7	663.1	6.75	11.50
		OFF	ON	3.83	65.0	682.4	7.26	11.30
		OFF	OFF	3.52	57.0	644.4	6.36	11.73
		ON	OFF	3.39	55.4	652.5	6.54	11.65
1972	4	ON	OFF	5.21	73.0	670.0	5.69	10.99
		OFF	ON	6.18	95.8	684.2	6.04	10.35
		OFF	OFF	5.41	83.5	630.5	4.91	11.34
		ON	OFF	5.39	86.3	650.8	5.35	10.98
1973	9	ON	OFF	3.54	65.4	701.4	4.50	10.74
		OFF	ON	3.72	66.5	732.8	5.27	10.32
		OFF	OFF	3.35	59.4	697.8	4.42	10.91
		ON	OFF	3.53	65.2	711.0	4.48	10.62
1974	5	ON	OFF	2.70	30.5	761.3	3.97	10.57
		OFF	ON	3.35	41.7	810.7	4.80	9.88
		OFF	OFF	2.41	30.3	741.2	3.85	10.94
		ON	OFF	2.48	26.3	746.9	3.52	10.95
TOTAL	40	ON	OFF	4.23	67.9	670.4	5.35	11.10
		OFF	ON	4.53	77.1	692.2	5.81	10.62
		OFF	OFF	4.10	67.5	653.2	5.03	11.35
		ON	OFF	4.00	65.1	658.4	5.13	11.26

EMISSION RESULTS IN GRAMS PER MILE
FUEL ECONOMY IN MILES PER GALLON
FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO

AUTOMOTIVE TESTING LABORATORIES, INC.
19900 E. COLFAX, AURORA, COLO. 80011

3.5 DISCUSSION OF EMISSIONS FROM LOADED VEHICLES AND VEHICLES TOWING TRAILERS

Data relative to this task are presented in Table 14 comprising the next 8 pages following this paragraph.

Data indicate generally higher HC, CO, CO_2 and NO_x emissions from loaded vehicles and vehicles towing trailers for each model-year. A significant increase in emissions is noted for vehicles towing trailers (third test). As loads are increased, general decreases in fuel economy can also be observed.

Steady state data indicate a general lowering in HC and CO emissions on a grams/mile basis as speeds are increased. NO_x emissions tend to increase with increasing speed. From the points measured, best fuel economy appears at about 30 miles per hour.

TABLE 14

SUMMARY OF LOADED VEHICLE TESTS ON
SIX 1967 MODEL YEAR VEHICLES

DETROIT

MODAL EMISSION TEST PROCEDURE

MODE NO.	FIRST TEST					SECOND TEST					THIRD TEST				
	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON
1	20.73	107.8	420.4	2.88	13.5	10.84	135.3	423.3	3.33	13.2	11.49	121.0	431.2	2.70	13.5
2	18.00	128.9	570.2	3.06	10.7	10.14	171.9	563.6	2.60	10.2	10.03	168.6	644.3	3.45	9.4
3	32.50	187.5	764.5	3.05	7.6	19.78	230.1	803.2	3.23	7.2	20.60	230.9	861.1	3.89	6.9
4	12.07	99.7	422.1	2.95	14.4	6.80	97.4	448.8	3.50	14.2	7.26	108.5	492.6	3.94	12.9
5	6.95	75.6	418.3	4.26	15.9	4.12	71.8	438.0	4.68	15.7	4.76	91.0	485.3	4.40	13.8
6	6.48	67.2	410.1	3.27	16.6	3.98	63.1	427.3	3.89	16.5	5.29	98.3	528.9	4.85	12.7
7	7.22	102.6	448.4	4.64	14.0	5.64	114.9	472.6	4.97	13.2	6.40	141.6	555.0	5.93	11.1
8	6.58	102.7	468.7	4.51	13.6	5.30	108.8	490.7	4.98	13.1	7.17	188.5	659.0	6.36	9.1
9	6.37	84.9	458.0	5.39	14.5	5.51	94.5	475.2	4.87	13.8	6.75	135.2	601.8	7.23	10.6
10	7.18	74.4	511.9	5.29	13.6	6.22	87.9	518.1	5.34	13.1	8.58	213.3	701.4	6.68	8.3
11	8.10	137.7	480.5	4.13	12.3	7.44	176.8	503.1	4.10	11.2	9.26	208.6	614.8	5.31	9.1
12	8.76	115.5	619.7	6.20	10.7	7.87	139.2	660.5	6.42	9.8	10.51	278.3	872.0	7.80	6.6
13	9.44	144.4	566.6	5.20	10.8	8.90	179.2	601.8	4.78	9.7	10.90	254.4	722.6	5.87	7.7
14	6.20	87.3	464.5	4.82	14.3	5.77	107.9	472.3	4.55	13.4	7.75	190.4	636.3	5.79	9.2
15	12.48	102.3	475.8	3.00	13.1	11.79	119.2	472.7	2.66	12.7	13.34	166.2	609.9	3.87	9.7
16	33.21	241.8	897.4	3.95	6.4	29.92	263.9	893.5	3.65	6.3	30.26	345.6	1091.0	5.06	5.1
17	9.84	123.8	467.9	3.84	12.8	8.97	161.9	475.9	3.44	11.7	9.42	203.0	525.5	3.07	10.2
18	7.42	96.6	490.5	3.69	13.3	6.75	130.0	494.8	3.38	12.3	7.81	191.7	590.2	3.13	9.7
19	8.41	100.0	447.5	3.88	14.1	8.12	146.8	453.3	3.01	12.5	8.42	181.7	508.8	2.97	10.8
20	9.04	112.6	572.3	4.36	11.4	9.34	164.6	818.3	3.41	8.[illegible]	9.58	216.0	701.2	4.73	8.3
21	8.91	161.4	532.4	4.72	10.9	8.96	202.5	562.0	4.72	9.8	9.15	249.0	628.2	4.59	8.5
22	8.53	127.3	575.3	5.08	11.1	8.55	160.8	582.7	5.01	10.3	10.42	289.9	739.3	5.47	7.2
23	16.77	168.9	678.8	6.04	8.9	16.86	176.6	713.2	5.93	8.5	17.07	280.1	836.8	4.97	6.7
24	5.48	83.9	456.0	4.98	14.7	5.48	109.6	483.2	4.58	13.2	6.82	174.7	532.3	3.80	10.7
25	5.00	68.8	469.9	4.94	14.9	5.59	84.0	476.8	4.89	14.2	6.77	185.4	608.7	5.78	9.6
26	15.62	133.6	684.4	4.54	9.4	15.82	149.1	708.6	4.40	8.9	16.68	234.3	845.3	5.66	7.0
27	7.53	118.6	516.1	4.91	12.2	7.82	168.8	536.4	3.97	10.7	8.65	234.9	626.8	4.14	8.7
28	7.75	88.9	520.8	5.15	13.0	7.74	107.2	530.0	5.19	12.3	8.25	206.2	679.0	5.93	8.6
29	15.22	123.5	628.0	5.79	10.2	14.84	147.8	665.0	5.97	9.4	14.51	217.9	774.5	6.17	7.6
30	5.54	90.8	469.4	4.75	14.1	5.60	144.7	478.5	3.50	12.3	6.08	176.8	553.8	4.33	10.4
31	5.27	93.2	486.1	4.55	13.7	5.45	116.1	489.9	4.45	12.9	7.31	195.5	627.0	5.62	9.3
32	14.51	149.3	692.9	4.48	9.1	15.46	195.4	679.0	5.84	8.6	15.84	255.4	844.5	5.55	6.8
CALC.	6.49	90.2	483.5	4.72	13.7	5.99	105.3	497.6	4.65	13.0	6.88	147.9	617.6	6.32	10.2
BAG	7.00	109.3	517.1	4.73	12.5	7.55	139.6	537.4	4.51	11.4	8.83	211.3	660.8	5.28	8.7
IDLE	1.89	21.2	71.3	0.13	80.2	2.02	19.6	75.7	0.13	78.7	1.90	21.7	77.2	0.17	75.7
5MPH	28.60	246.6	856.2	0.97	6.7	23.89	237.7	898.1	1.22	6.6	22.63	237.2	846.0	0.89	6.9
10MPH	9.96	151.3	498.5	0.40	11.6	9.30	130.8	503.3	0.37	12.0	8.06	130.6	527.6	0.43	11.7
15MPH	5.51	108.9	370.7	0.40	15.9	5.33	100.6	379.1	0.37	16.0	5.05	102.6	404.5	0.44	15.3
30MPH	3.12	59.4	342.5	1.35	19.9	2.66	60.6	342.8	1.82	19.9	3.50	67.7	391.8	2.08	17.4
45MPH	2.95	53.5	400.8	3.85	18.0	2.87	51.3	415.2	4.11	17.6	3.38	55.7	536.1	7.12	14.0
60MPH	3.07	51.9	477.8	7.15	15.6	2.92	50.3	474.3	7.05	15.8	3.36	56.2	671.2	11.87	11.5

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

TABLE 14 CONT'D

SUMMARY OF LOADED VEHICLE TESTS ON
SIX 1968 MODEL YEAR VEHICLES

DETROIT

MODAL EMISSION TEST PROCEDURE

MODE NO.	FIRST TEST HC	CO	CO2	NOX	FUEL ECON	SECOND TEST HC	CO	CO2	NOX	FUEL ECON	THIRD TEST HC	CO	CO2	NOX	FUEL ECON
1	11.03	94.1	417.2	3.80	14.9	13.15	139.2	463.0	3.77	13.1	12.90	130.2	435.4	4.15	13.0
2	14.50	97.1	528.8	4.41	12.2	14.69	93.3	581.5	5.10	11.5	17.18	119.9	628.9	6.15	10.2
3	23.62	164.7	790.3	6.07	7.9	25.34	167.7	836.9	5.78	7.5	30.94	197.4	882.4	6.98	6.9
4	10.90	71.3	437.9	6.30	15.2	12.55	80.0	481.8	4.82	13.7	16.57	92.0	518.2	6.43	12.4
5	9.08	51.4	428.5	6.69	16.5	10.29	59.9	451.5	6.46	15.3	13.02	76.7	509.2	8.44	13.2
6	9.57	45.1	409.2	5.81	17.4	10.10	45.5	420.6	5.71	16.9	14.93	70.3	512.8	7.81	13.2
7	13.21	119.5	459.8	7.45	13.1	14.80	145.0	499.8	6.55	11.4	14.31	140.6	542.6	7.43	11.0
8	12.32	96.3	477.4	6.64	13.5	13.02	93.8	466.0	6.56	13.6	15.30	203.0	635.7	9.01	8.9
9	11.94	70.3	467.4	7.42	14.4	12.58	91.8	457.5	7.29	13.5	14.94	159.6	603.4	9.88	8.8
10	14.83	60.4	517.1	7.33	13.5	15.16	65.5	513.0	7.59	13.4	14.40	169.4	731.7	11.53	8.4
11	14.17	119.2	512.0	7.27	11.9	15.21	155.6	[illegible]	7.64	10.7	[illegible]	200.5	614.3	7.60	8.9
12	17.72	86.4	629.2	9.13	10.8	19.32	102.3	641.3	9.46	10.3	19.73	237.5	[illegible]	12.28	7.8
13	16.50	131.6	573.4	8.98	10.7	18.14	159.3	642.8	8.71	9.5	[illegible]	237.2	771.8	10.16	7.4
14	13.27	74.8	473.5	6.66	14.0	13.38	81.1	475.2	6.85	13.7	13.95	101.5	684.4	10.35	9.2
15	19.25	75.7	503.7	4.64	12.6	20.74	81.5	486.1	4.70	13.0	25.99	128.3	658.2	7.39	9.4
16	43.67	194.9	956.9	6.07	6.1	46.32	197.7	951.8	[illegible]	[illegible]	64.24	253.8	[illegible]	9.48	[illegible]
17	13.58	84.2	431.9	7.07	14.6	14.46	106.9	496.1	6.81	11.4	20.77	166.1	571.9	7.11	8.8
18	13.38	66.1	493.0	5.75	13.9	13.96	74.3	[illegible]	[illegible]	13.3	17.71	129.8	611.6	[illegible]	[illegible]
19	13.86	86.6	452.4	8.29	14.2	14.73	111.9	479.5	[illegible]	12.9	[illegible]	[illegible]	[illegible]	7.27	11.1
20	17.02	90.4	575.8	6.48	11.5	[illegible]	[illegible]	[illegible]	[illegible]	11.1	[illegible]	128.4	776.7	[illegible]	[illegible]
21	16.11	157.7	526.5	7.38	10.8	16.77	134.9	[illegible]	6.77	9.6	16.77	[illegible]	[illegible]	7.38	[illegible]
22	18.66	116.2	583.3	7.23	10.8	[illegible]	122.8	[illegible]	7.18	[illegible]	18.04	[illegible]	[illegible]	11.69	7.4
23	24.85	137.5	704.2	8.59	8.3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	11.53	[illegible]
24	13.07	74.2	458.8	7.69	14.4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	8.75	[illegible]
25	[illegible]	60.7	462.3	6.96	14.8	[illegible]	[illegible]	479.0	[illegible]	14.4	[illegible]	152.7	[illegible]	[illegible]	[illegible]
26	26.77	113.0	717.2	6.75	9.1	[illegible]	134.4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	10.40	[illegible]
27	[illegible]	[illegible]	519.9	8.29	11.6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9.67	[illegible]
28	17.53	[illegible]	523.8	7.39	[illegible]	19.41	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	11.01	[illegible]
29	22.12	[illegible]	651.6	8.29	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
30	13.27	99.2	477.7	6.94	13.1	13.09	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	151.1	544.3	[illegible]	[illegible]
31	[illegible]	78.8	473.2	6.71	[illegible]	13.47	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	173.9	[illegible]	8.97	[illegible]
32	27.12	131.4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	6.26	[illegible]	[illegible]	211.1	[illegible]	9.57	[illegible]
CALC.	12.89	71.7	493.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	111.7	[illegible]	8.86	[illegible]
BAG	16.86	[illegible]	521.6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	177.9	[illegible]	[illegible]	[illegible]
IDLE	1.75	16.1	71.7	[illegible]	86.4	[illegible]	18.6	[illegible]	[illegible]	[illegible]	1.73	17.3	[illegible]	[illegible]	[illegible]
[illegible]MPH	28.8[illegible]	211.3	[illegible]	1.62	[illegible]	21.64	191.7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1.41	[illegible]
10MPH	11.64	143.2	544.1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
15MPH	[illegible]	75.5	447.0	[illegible]	14.9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	8.51	[illegible]
35MPH	5.36	37.1	359.2	[illegible]	19.9	5.50	34.3	[illegible]	[illegible]	[illegible]	4.39	33.7	[illegible]	4.95	[illegible]
45MPH	[illegible]	26.2	411.9	[illegible]	18.9	9.39	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	11.73	[illegible]
60MPH	9.31	26.1	486.9	9.48	15.8	9.11	[illegible]	[illegible]	[illegible]	[illegible]	9.95	[illegible]	[illegible]	14.03	[illegible]

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE).
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE).

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

AUTOMOTIVE TESTING LABORATORIES, INC.
19900 E. COLFAX, AURORA, COLO. 80011

TABLE 14 CONT'D

SUMMARY OF LOADED VEHICLE TESTS ON
SIX 1969 MODEL YEAR VEHICLES

DETROIT

MODAL EMISSION TEST PROCEDURE

MODE NO.	FIRST TEST HC	CO	CO2	NOX	FUEL ECON	SECOND TEST HC	CO	CO2	NOX	FUEL ECON	THIRD TEST HC	CO	CO2	NOX	FUEL ECON
1	5.98	91.1	430.7	5.52	15.0	6.43	96.6	407.9	5.46	15.3	6.56	98.6	479.1	6.13	13.6
2	5.67	58.8	574.4	6.94	13.0	6.07	67.6	611.8	7.65	12.0	6.21	73.5	682.8	10.04	10.8
3	9.82	153.1	740.8	6.39	8.8	11.61	161.6	859.0	8.27	7.7	10.98	174.0	918.5	10.73	7.2
4	4.10	58.6	461.9	5.98	15.7	4.15	61.2	488.5	7.02	14.8	4.25	64.5	525.5	8.75	13.9
5	2.75	27.1	439.2	8.48	18.1	2.97	27.0	458.6	9.46	17.4	3.17	32.3	524.0	11.88	15.2
6	2.73	19.6	408.6	6.71	19.8	2.77	22.1	427.4	7.35	18.9	3.23	36.4	538.2	10.76	14.7
7	3.18	46.3	479.2	8.61	15.8	3.52	49.1	498.0	9.22	15.1	4.26	79.4	574.7	10.13	12.4
8	3.06	38.9	457.2	8.08	16.8	3.29	52.8	476.5	8.08	15.6	4.27	97.4	650.4	11.72	10.9
9	3.18	26.2	468.4	10.73	17.1	3.56	34.0	487.1	10.88	16.1	4.27	66.4	611.5	13.08	12.2
10	3.56	27.3	500.6	9.72	16.0	3.92	35.5	513.9	9.76	15.2	4.91	73.3	719.7	14.49	10.4
11	3.94	62.2	512.6	10.29	14.3	4.45	63.6	547.6	9.99	13.4	5.21	115.8	630.9	10.15	10.7
12	4.49	46.7	603.4	11.40	12.8	4.92	54.6	641.8	12.26	11.9	6.14	108.5	866.9	16.15	8.4
13	4.68	60.2	590.2	12.91	12.7	5.11	64.1	629.8	13.74	11.9	6.13	123.8	745.7	12.41	9.2
14	3.21	30.7	441.9	8.97	17.7	3.46	36.5	475.2	9.37	16.3	4.54	76.6	586.5	12.50	12.3
15	6.12	45.5	487.2	6.31	15.4	6.44	53.5	503.5	6.61	14.6	7.92	72.6	636.7	9.86	11.4
16	14.40	160.8	960.1	8.33	7.1	15.34	184.8	981.7	8.72	6.7	17.00	204.5	1171.2	12.44	5.7
17	4.25	59.8	470.9	9.15	15.3	4.91	72.8	511.7	10.37	13.8	5.23	89.2	558.5	10.70	12.4
18	3.87	41.0	484.6	8.14	15.8	3.92	43.0	520.4	9.04	14.8	4.63	62.0	626.7	12.31	12.0
19	4.31	55.8	458.7	8.61	15.8	4.55	58.3	488.6	9.59	14.9	4.79	76.5	544.3	9.62	13.1
20	4.91	44.1	587.6	9.58	13.2	5.13	50.6	613.3	10.63	12.5	5.93	81.1	755.9	13.68	9.8
21	4.54	89.9	551.9	9.77	12.5	5.31	121.0	582.6	8.75	11.2	6.09	156.3	673.5	8.53	9.5
22	4.46	56.7	565.7	9.12	13.3	5.14	78.6	579.1	9.44	12.3	6.30	126.7	767.5	12.74	9.0
23	8.58	102.4	706.7	11.49	9.9	8.50	119.0	748.3	12.70	9.2	10.06	148.3	881.2	15.52	7.7
24	3.06	30.5	470.5	10.86	16.8	3.39	35.1	502.0	11.64	15.6	4.02	67.5	576.7	11.36	12.8
25	2.96	25.6	452.8	9.21	17.7	3.21	30.0	467.5	9.57	16.9	4.17	70.9	623.6	12.14	11.9
26	8.24	2.7	696.0	8.80	10.8	8.85	67.0	717.5	10.23	10.4	9.76	99.3	895.7	15.01	8.2
27	3.96	48.6	534.5	12.36	14.2	4.40	56.3	571.1	12 51	13.2	5.18	106.8	657.9	11.49	10.5
28	4.09	39.2	516.4	9.66	15.0	4.48	43.8	533.9	9.93	14.4	5.48	80.2	713.0	13.71	10.4
29	7.44	89.7	653.3	11.22	10.9	8.57	100.1	686.2	12.37	10.2	8.87	114.2	792.3	14.93	8.9
30	2.82	33.5	494.2	11.24	16.0	3.51	38.7	522.7	11.17	14.9	4.28	85.9	584.0	7.91	12.1
31	3.08	32.6	468.0	9.08	16.8	3.39	41.6	489.2	9.50	15.7	4.24	91.2	609.6	11.33	11.6
32	7.86	68.6	706.4	9.42	10.6	8.72	78.1	695.6	10.53	10.5	9.26	120.8	880.5	13.32	8.1
CALC.	3.44	39.1	489.5	9.13	15.8	3.72	44.3	507.7	9.44	15.1	4.36	67.9	631.2	12.08	11.8
BAG	3.93	48.7	527.3	8.60	14.4	4.15	54.3	554.3	9.09	13.6	5.22	96.7	686.7	10.09	10.4
IDLE	1.08	22.5	64.4	0.13	86.0	1.00	22.0	72.8	0.18	80.2	1.16	23.9	71.9	0.21	78.5
5MPH	11.06	283.2	849.3	1.51	6.7	9.79	275.7	883.4	1.34	6.6	11.42	285.2	927.5	1.80	6.3
10MPH	5.08	124.5	535.9	0.40	11.9	4.99	120.9	573.8	0.58	11.4	5.28	115.5	573.4	0.80	11.5
15MPH	3.22	69.0	458.9	0.75	15.4	3.31	66.4	463.8	1.31	15.3	6.29	58.5	494.0	2.24	14.9
30MPH	2.00	12.0	359.7	3.68	23.1	2.16	16.9	363.6	3.78	22.4	2.22	10.4	432.3	6.96	19.5
45MPH	1.95	11.3	420.8	8.02	20.0	2.07	9.7	422.4	8.24	20.0	2.50	19.6	537.8	13.00	15.4
60MPH	2.21	18.9	465.6	11.25	17.7	2.27	20.2	468.8	11.33	17.5	2.84	28.9	647.3	16.14	12.6

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

AUTOMOTIVE TESTING LABORATORIES, INC.
19900 E. COLFAX, AURORA, COLO. 80011

TABLE 14 CONT'D

SUMMARY OF LOADED VEHICLE TESTS ON
SIX 1979 MODEL YEAR VEHICLES

DETROIT

MODAL EMISSION TEST PROCEDURE

MODL NO.	FIRST TEST					SECOND TEST					THIRD TEST				
	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON
1	4.51	70.1	464.1	5.07	15.1	4.23	68.6	532.7	5.60	13.6	4.59	67.0	517.9	5.45	13.9
2	4.26	50.7	657.4	5.65	11.8	3.97	43.0	694.7	6.28	11.5	4.36	49.1	783.0	8.30	10.2
3	7.78	108.7	924.6	4.85	7.9	6.51	109.2	950.1	5.89	7.8	7.63	106.0	1040.6	7.22	7.2
4	2.88	42.3	512.4	4.39	15.1	2.84	40.8	554.2	4.96	14.1	2.97	40.6	607.0	6.29	13.0
5	2.10	24.0	463.6	7.39	17.5	2.10	22.0	503.9	7.40	16.3	2.36	25.2	577.1	9.96	14.2
6	2.33	21.0	465.0	6.82	17.6	2.48	40.5	401.7	6.94	18.8	2.49	24.6	599.0	9.99	13.7
7	2.94	52.8	497.8	7.31	15.0	2.93	63.7	525.7	6.67	14.0	3.59	85.6	610.5	8.61	11.7
8	2.72	47.7	523.5	7.63	14.6	2.93	58.2	539.4	7.72	13.9	3.35	85.9	727.9	11.52	10.2
9	2.94	31.6	511.1	9.70	15.6	3.01	37.9	527.9	9.43	14.9	3.75	77.6	668.4	10.82	11.2
10	3.40	29.0	563.6	9.98	14.3	3.39	31.7	583.5	9.65	13.8	4.00	63.5	792.0	13.07	9.7
11	3.17	43.2	575.6	9.87	13.6	3.56	63.6	596.2	9.18	12.5	4.54	134.9	673.9	7.78	9.8
12	4.33	39.3	705.1	12.14	11.4	4.24	46.2	740.8	11.58	10.7	5.20	119.0	957.6	14.14	7.6
13	3.76	47.6	675.1	11.64	11.7	3.98	60.7	684.5	11.24	11.2	4.91	141.7	791.5	10.60	8.6
14	2.96	29.4	530.7	9.00	15.1	2.95	33.9	539.9	8.70	14.7	3.71	77.5	714.0	10.99	10.5
15	5.53	40.0	552.1	6.02	14.0	4.76	40.4	560.1	5.45	13.9	5.43	55.0	703.1	7.73	10.9
16	11.92	115.4	1121.6	7.55	6.6	10.36	115.1	1121.4	6.75	6.6	10.97	127.5	1332.7	9.97	5.7
17	3.30	49.4	531.7	7.20	14.3	3.23	46.5	529.3	8.60	14.5	3.60	60.6	625.6	10.02	11.1
18	3.19	33.8	572.3	8.72	14.0	3.18	30.5	582.6	7.46	13.9	3.72	44.6	727.4	11.57	11.0
19	3.21	41.3	523.9	6.93	14.8	3.07	39.8	547.9	7.87	14.3	3.55	61.0	608.2	8.48	12.4
20	4.02	42.2	678.5	10.28	11.7	3.90	34.5	698.2	10.01	11.6	4.56	58.8	834.6	11.51	9.3
21	3.65	110.3	600.1	7.39	11.3	3.94	127.9	623.6	7.05	10.6	5.10	173.0	687.8	6.60	9.1
22	4.15	63.8	653.5	9.81	11.6	4.36	75.4	666.2	9.30	11.1	4.01	122.8	878.7	11.17	8.1
23	7.04	85.7	786.1	9.93	9.4	6.84	92.2	826.5	9.82	8.8	7.10	110.5	952.7	12.01	7.7
24	2.50	26.5	533.4	9.64	15.1	2.64	31.8	547.3	9.81	14.7	3.20	73.4	607.0	9.19	12.1
25	2.63	27.1	536.3	9.60	15.1	2.65	29.8	550.1	9.42	14.7	3.47	73.3	732.4	11.72	10.5
26	7.52	53.2	804.6	9.43	9.7	7.11	58.4	843.5	8.84	9.2	7.57	81.2	1025.3	10.95	7.7
27	3.09	40.3	576.4	10.60	13.7	3.31	45.4	632.4	11.03	12.4	4.18	97.1	713.1	10.74	10.1
28	3.69	33.6	607.1	10.89	13.2	3.53	36.0	591.0	9.64	13.5	4.27	65.3	675.1	[illegible]	9.8
29	6.10	68.9	723.0	9.31	10.4	6.21	77.4	743.9	9.04	10.0	6.44	43.2	985.8	11.28	8.8
30	2.54	34.8	546.3	10.14	14.6	2.79	41.3	569.0	10.03	13.8	3.75	91.5	614.5	8.62	11.5
31	2.80	33.6	555.5	8.13	14.4	2.84	43.0	595.8	8.12	13.0	3.63	93.8	732.6	10.77	10.0
32	6.73	56.8	825.1	9.52	9.5	7.00	69.1	858.3	8.65	9.4	7.73	93.1	1057.4	10.87	7.5
CALC.	2.86	37.0	553.9	8.49	14.3	2.92	41.1	565.0	8.43	13.9	3.41	65.2	693.5	10.61	11.0
BAG	3.31	43.6	601.9	6.25	13.0	3.46	52.8	625.6	6.43	12.4	4.04	93.7	757.6	9.33	9.6
IDLE	0.65	15.4	86.7	0.17	75.6	0.66	15.9	87.1	0.30	77.1	0.75	18.0	90.2	0.32	70.8
5MPH	7.58	176.6	1030.2	1.76	6.7	6.78	187.6	985.5	1.01	6.8	7.84	190.2	995.3	1.24	6.7
10MPH	2.69	67.7	737.4	0.82	10.4	2.70	71.9	708.6	0.79	10.7	3.19	73.4	711.0	0.87	10.6
15MPH	1.74	41.5	575.1	0.81	13.7	1.46	41.1	565.5	0.75	14.0	1.71	39.4	602.6	0.83	13.5
30MPH	1.62	15.2	415.9	3.06	19.9	1.69	15.0	408.0	2.92	20.3	1.54	9.9	471.2	5.07	18.1
45MPH	1.73	17.2	453.1	7.70	18.3	1.90	20.3	473.8	7.99	17.3	2.25	25.7	571.0	11.09	14.3
60MPH	1.89	23.3	511.8	10.22	16.0	1.91	23.4	513.6	10.37	15.9	2.25	28.3	687.9	14.82	12.8

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

AUTOMOTIVE TESTING LABORATORIES, INC.
19900 E. COLFAX, AURORA, COLO. 80011

TABLE 14 CONT'D

SUMMARY OF LOADED VEHICLE TESTS ON
SIX 1971 MODEL YEAR VEHICLES

DETROIT

MODAL EMISSION TEST PROCEDURE

MODE NO.	FIRST TEST HC	CO	CO2	NOX	FUEL ECON	SECOND TEST HC	CO	CO2	NOX	FUEL ECON	THIRD TEST HC	CO	CO2	NOX	FUEL ECON
1	4.63	67.6	531.0	5.16	13.6	4.66	68.2	537.3	5.57	13.5	5.46	84.2	620.1	6.10	11.5
2	4.53	47.6	699.1	5.03	11.3	4.35	53.8	730.3	5.55	10.7	5.50	62.6	764.2	6.89	10.1
3	7.95	107.5	1025.1	5.41	7.3	7.81	105.4	1063.5	6.00	7.1	8.95	122.5	1139.9	7.50	6.5
4	3.42	34.7	563.8	4.71	14.1	3.08	43.5	574.9	5.59	13.6	3.37	45.0	624.9	6.51	12.6
5	2.12	19.0	506.2	7.33	16.3	2.14	21.5	519.0	8.09	15.9	2.30	22.5	583.9	8.75	14.2
6	1.94	11.6	491.9	5.83	17.2	1.99	11.8	512.3	6.50	16.5	2.35	18.0	608.9	10.31	13.8
7	2.86	47.3	544.9	6.92	14.1	3.15	58.2	544.8	7.13	13.7	3.50	91.2	634.4	8.14	11.3
8	2.41	40.4	552.4	8.06	14.2	2.73	57.8	566.4	8.02	13.3	3.38	80.0	734.3	11.68	10.2
9	2.55	25.2	525.3	9.86	15.5	2.40	31.6	552.5	9.65	14.6	3.32	75.5	683.8	11.42	10.9
10	2.62	18.1	609.2	9.24	13.7	2.89	22.7	627.3	9.21	13.2	3.65	58.9	819.0	14.03	9.6
11	3.06	50.1	607.9	9.52	12.7	3.50	64.0	626.9	9.78	12.0	4.07	123.4	720.6	8.86	9.6
12	3.35	30.6	752.1	11.78	10.9	3.78	41.1	778.0	12.08	10.4	4.76	98.7	979.2	14.84	7.7
13	3.48	43.2	718.9	12.07	11.1	4.25	68.2	729.7	11.38	10.4	4.73	150.6	844.0	10.81	8.1
14	2.49	20.2	555.6	8.80	14.9	2.80	30.9	580.4	8.83	13.9	3.38	70.7	725.3	11.17	10.5
15	4.48	34.6	586.1	5.30	13.6	5.07	34.7	611.3	5.47	13.0	5.56	63.1	738.1	7.66	10.4
16	10.50	123.4	1234.2	7.54	6.1	12.44	128.3	1263.7	7.47	5.9	12.42	164.1	1427.2	12.09	5.1
17	3.23	45.2	542.1	9.05	14.2	3.70	52.5	603.5	9.21	12.7	4.62	85.3	688.9	8.99	10.6
18	2.66	20.8	592.9	7.93	14.0	2.93	23.8	614.7	8.12	13.4	4.33	47.0	730.8	10.57	10.8
19	3.00	34.8	552.6	7.85	14.4	3.30	40.3	570.2	8.24	13.8	4.08	60.3	669.3	9.97	11.4
20	3.36	25.6	699.5	8.98	11.8	3.70	31.2	693.1	9.30	11.8	5.06	56.8	864.6	12.96	9.2
21	3.89	96.3	659.4	7.64	10.8	4.43	132.1	651.2	7.55	10.2	6.54	192.9	738.2	7.31	8.4
22	3.61	57.8	687.9	9.47	11.2	4.15	70.5	717.1	9.40	10.6	7.52	124.0	866.3	12.05	8.2
23	6.29	77.3	853.3	10.89	8.9	6.95	89.7	867.2	11.07	8.6	9.64	126.8	1027.8	13.32	7.1
24	2.33	20.1	551.1	9.84	15.0	2.78	28.4	560.8	9.71	14.[illegible]	4.18	86.5	639.2	9.19	11.3
25	2.15	14.5	561.7	9.45	15.0	2.57	21.6	543.2	8.98	15.2	5.12	66.1	695.4	11.82	10.9
26	6.26	45.1	846.8	8.31	9.5	7.19	50.2	920.1	7.67	8.7	9.97	90.5	999.5	10.75	7.6
27	2.94	35.0	640.0	11.40	12.6	3.50	45.7	666.9	11.58	11.5	4.73	120.9	740.7	10.91	9.4
28	2.92	22.8	648.8	9.06	12.8	3.48	27.3	659.3	9.34	12.4	4.09	66.5	802.4	11.86	9.6
29	5.54	65.2	792.4	9.81	9.7	6.26	71.6	830.2	10.58	9.2	6.51	103.6	940.2	12.54	7.9
30	2.41	24.2	566.6	10.30	14.5	2.96	36.6	572.4	9.54	13.9	4.79	120.7	641.8	9.42	10.5
31	2.41	23.0	569.5	8.68	14.5	2.92	36.9	585.7	8.58	13.6	5.86	88.1	699.0	9.72	10.4
32	6.01	51.7	852.8	8.22	9.3	6.83	64.1	874.4	8.34	8.9	10.96	130.3	970.4	10.26	7.3
CALC.	2.52	28.0	581.1	8.22	14.0	2.73	34.1	599.1	8.62	13.4	3.53	61.5	716.9	10.56	10.8
BAG	2.90	38.0	629.2	8.53	12.7	3.29	48.9	653.3	8.55	12.0	5.04	102.1	768.8	9.29	9.4
IDLE	0.74	14.6	99.7	0.32	71.0	0.69	14.4	105.5	0.41	68.1	0.76	15.7	107.6	0.49	65.9
5MPH	8.47	169.0	1196.5	2.30	6.0	7.89	163.6	1240.9	2.81	5.8	9.11	179.0	1264.1	3.08	5.6
10MPH	3.42	69.7	731.3	0.95	10.4	3.49	73.1	726.8	0.93	10.4	3.82	80.0	731.4	1.33	10.2
15MPH	2.12	35.2	576.1	0.83	13.9	2.14	34.3	588.6	0.91	13.7	2.29	34.4	589.3	0.99	13.6
30MPH	1.51	12.4	395.0	1.73	21.2	1.46	10.0	430.9	2.1[illegible]	19.7	1.46	5.3	465.7	3.49	18.4
45MPH	1.25	5.0	470.3	5.54	18.4	1.20	7.2	480.4	7.03	17.9	1.59	7.6	576.2	10.68	15.0
60MPH	1.37	8.7	533.2	10.54	16.1	1.26	8.2	546.2	11.50	15.8	1.46	10.0	727.6	14.78	11.9

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

AUTOMOTIVE TESTING LABORATORIES, INC.
19900 E. COLFAX, AURORA, COLO. 80011

TABLE 14 CONT'D

SUMMARY OF LOADED VEHICLE TESTS ON
SIX 197[illegible] MODEL YEAR VEHICLES

DETROIT

MODAL EMISSION TEST PROCEDURE

MODE NO.	FIRST TEST HC	FIRST TEST CO	FIRST TEST CO2	FIRST TEST NOX	FIRST TEST FUEL ECON	SECOND TEST HC	SECOND TEST CO	SECOND TEST CO2	SECOND TEST NOX	SECOND TEST FUEL ECON	THIRD TEST HC	THIRD TEST CO	THIRD TEST CO2	THIRD TEST NOX	THIRD TEST FUEL ECON
1	4.02	55.0	693.3	4.22	11.2	3.92	51.2	579.6	5.05	13.2	4.67	73.8	641.2	5.59	11.4
2	3.58	38.9	732.6	4.99	11.0	3.52	36.7	826.3	7.31	10.0	5.12	[illegible]	737.[illegible]	5.96	10.4
3	5.94	71.7	1140.4	4.90	7.0	6.87	70.0	1119.8	5.76	7.1	7.84	[illegible]	1101.3	4.96	[illegible]
4	2.59	30.5	649.3	3.63	12.6	2.03	30.5	596.9	4.77	13.6	3.01	35.0	672.4	5.97	[illegible]
5	2.21	15.2	583.9	5.42	14.4	1.73	15.8	557.4	6.57	15.1	2.46	[illegible]	[illegible]	7.79	[illegible]
6	2.11	21.9	531.2	6.19	16.3	1.66	20.2	546.8	5.97	15.6	2.93	21.8	[illegible]	7.30	15.1
7	2.54	79.7	582.2	5.62	12.4	2.75	[illegible]	597.0	5.20	11.6	3.17	[illegible]	558.[illegible]	7.18	[illegible]
8	2.19	56.2	555.6	7.16	13.7	2.44	66.4	612.5	6.23	12.[illegible]	3.05	34.7	748.[illegible]	8.04	[illegible]
9	2.43	35.4	598.8	7.85	13.4	2.65	40.[illegible]	558.1	7.60	14.[illegible]	2.53	[illegible]	712.4	6.11	[illegible]
10	2.83	21.2	595.6	8.76	13.9	2.88	34.4	634.8	7.98	12.7	3.[illegible]	[illegible]	[illegible]	9.21	[illegible]
11	2.76	52.0	690.4	7.81	11.6	[illegible]	71.6	630.9	7.37	11.[illegible]	[illegible]	[illegible]	[illegible]	6.88	[illegible]
12	5.82	29.3	756.2	10.48	1[illegible].7	1.61	32.1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
13	3.27	61.4	710.3	9.00	10.1	3.69	80.5	762.1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
14	2.21	31.5	649.7	7.43	14.6	2.59	39.[illegible]	[illegible]	7.21	14.4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
15	1.52	47.5	586.4	4.39	13.6	4.30	39.[illegible]	611.7	4.27	13.[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
16	7.24	118.3	1213.6	[illegible]	[illegible]	9.54	[illegible]	[illegible]	7.04	6.1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
17	2.73	59.6	551.6	6.29	12.0	2.50	54.1	614.[illegible]	7.05	12.[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
18	2.30	29.5	614.9	5.71	13.3	2.19	[illegible]	678.[illegible]	6.74	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
19	2.86	47.3	634.6	5.40	12.5	2.14	47.3	[illegible]	5.41	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
20	3.31	30.4	709.6	7.62	11.3	[illegible]	32.1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
21	5.62	131.8	736.2	[illegible]	[illegible]	5.02	139.2	[illegible]	6.61	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
22	5.38	7[illegible]	654.5	7.69	11.[illegible]	2.75	36.[illegible]	748.[illegible]	7.41	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
23	9.17	59.1	537.1	7.16	9.1	5.69	34.[illegible]	828.8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
24	2.28	34.3	610.1	7.14	13.1	[illegible]	49.7	[illegible]	7.81	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
25	2.08	28.0	564.5	5.10	14.8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
26	[illegible]	51.8	[illegible]	6.77	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
27	2.70	54.5	725.[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
28	2.77	39.[illegible]	621.6	[illegible]	[illegible]	2.90	[illegible]	[illegible]	7.51	11.7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
29	4.48	75.0	850.3	[illegible]	[illegible]	4.32	[illegible]	853.9	5.24	9.[illegible]	4.01	86.9	[illegible]	[illegible]	[illegible]
30	2.33	46.5	612.2	[illegible]	12.7	2.43	[illegible]	615.5	7.19	12.[illegible]	[illegible]	137.4	670.[illegible]	[illegible]	[illegible]
31	[illegible]	42.3	571.[illegible]	8.17	13.7	2.95	57.1	626.1	7.43	12.3	[illegible]	172.[illegible]	842.[illegible]	[illegible]	[illegible]
32	5.29	57.6	863.3	7.34	[illegible]	5.42	73.4	957.2	7.06	8.[illegible]	5.96	[illegible]	1021.[illegible]	[illegible]	[illegible]
CALI.	2.42	35.8	613.3	7.13	13.3	2.45	46.1	627.1	7.29	12.8	2.96	[illegible]	709.4	[illegible]	[illegible]
BAG	2.70	41.2	669.8	7.27	11.7	2.96	52.8	705.0	7.51	10.9	3.86	115.1	[illegible]	[illegible]	[illegible]
IDLE	0.76	11.8	96.6	0.30	74.4	0.19	19.4	109.4	0.21	72.[illegible]	[illegible]	16.7	[illegible]	[illegible]	[illegible]
0MPH	6.35	121.6	1215.1	1.44	[illegible]	8.21	122.3	1227.8	1.25	6.[illegible]	8.21	113.8	[illegible]	[illegible]	[illegible]
10MPH	2.53	50.6	796.2	0.73	10.3	2.30	60.8	719.8	0.67	10.9	3.51	96.4	[illegible]	[illegible]	[illegible]
15MPH	1.75	35.7	693.7	0.85	13.0	1.86	28.7	[illegible]	0.78	13.[illegible]	1.73	[illegible]	[illegible]	1.11	[illegible]
30MPH	1.32	[illegible]	441.7	2.34	19.8	1.40	6.7	447.5	2.40	19.4	1.52	7.1	533.6	[illegible]	[illegible]
45MPH	1.40	16.0	487.6	6.38	17.9	1.48	6.8	[illegible]	6.63	17.[illegible]	1.92	16.1	571.[illegible]	[illegible]	14.7
60MPH	1.34	11.7	592.5	9.88	15.4	1.40	10.6	557.1	10.30	15.3	1.65	[illegible]	[illegible]	10.[illegible]	[illegible]

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.8[illegible] CARBON TO HYDROGEN RATIO

TABLE 14 CONT'D

SUMMARY OF LOADED VEHICLE TESTS ON
SIX 1973 MODEL YEAR VEHICLES

DETROIT

MODAL EMISSION TEST PROCEDURE

MODE NO.	FIRST TEST					SECOND TEST					THIRD TEST				
	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON
1	5.63	85.5	574.5	4.21	12.2	4.86	70.5	576.2	4.78	12.6	6.74	117.8	620.5	3.99	10.7
2	4.67	76.7	730.6	3.55	10.3	4.17	61.4	796.5	3.88	9.8	5.34	94.3	790.4	3.98	9.3
3	9.12	135.8	1054.7	3.99	6.8	8.35	113.6	1089.1	4.23	6.9	9.46	150.5	1166.6	4.58	6.2
4	3.52	56.6	642.8	3.78	11.9	3.08	48.3	642.0	4.15	12.2	3.50	55.1	693.3	4.44	11.2
5	2.07	27.5	554.7	5.18	14.7	2.02	22.0	566.6	5.97	14.6	2.47	42.6	637.2	6.52	12.5
6	1.96	17.0	510.0	3.82	16.3	2.11	13.8	546.3	4.48	15.4	2.24	27.8	640.4	5.41	12.8
7	2.80	75.9	563.8	5.58	12.8	2.75	64.7	581.0	6.05	12.8	3.49	103.1	629.3	6.73	11.1
8	2.29	54.2	578.9	5.80	13.2	2.27	60.0	615.1	5.73	12.4	3.09	100.8	766.8	8.07	9.5
9	2.57	48.7	574.6	6.70	13.5	2.68	42.4	582.7	6.87	13.5	3.58	96.6	734.5	8.17	9.5
10	2.60	30.5	609.0	6.41	13.3	2.58	30.3	645.4	6.60	12.7	3.40	73.5	864.5	9.68	9.0
11	3.41	96.5	627.6	7.11	11.2	3.61	89.3	639.8	7.48	11.2	4.47	173.2	773.9	6.99	8.4
12	3.19	48.6	768.8	8.20	10.4	3.42	54.3	811.3	8.73	9.8	4.48	129.2	1000.1	10.02	7.3
13	3.89	91.7	724.1	8.36	10.1	4.23	93.9	749.8	8.98	9.7	5.21	165.1	890.4	8.42	7.6
14	2.28	35.0	575.1	5.79	13.9	2.69	41.0	603.4	6.39	13.1	3.17	89.1	749.2	7.49	9.9
15	4.78	46.1	650.0	3.46	12.0	5.16	46.9	596.1	3.79	12.9	5.21	77.0	746.4	4.62	10.0
16	11.29	148.8	1207.9	4.66	6.0	11.80	134.0	1213.3	5.00	6.1	11.93	188.2	1410.1	5.90	5.1
17	3.34	69.2	599.1	6.17	12.4	3.55	68.3	615.9	6.09	12.1	4.02	126.1	672.6	6.06	10.0
18	2.57	35.2	646.7	5.17	12.5	2.73	38.7	663.5	5.20	12.1	3.48	72.3	781.7	5.99	9.8
19	3.15	49.6	577.6	5.88	13.3	3.30	56.2	573.4	5.76	13.2	3.84	94.9	648.4	5.53	11.7
20	3.24	37.8	779.2	5.64	10.5	3.51	49.7	801.6	5.77	10.0	4.47	92.1	935.5	6.90	8.1
21	3.90	129.5	675.2	6.54	10.0	4.34	149.6	715.0	6.20	9.2	5.14	209.9	767.8	6.11	9.0
22	3.40	69.3	714.5	5.86	10.6	3.73	83.7	735.0	7.00	10.1	4.79	164.1	844.5	8.41	7.9
23	6.23	88.4	925.6	6.78	8.2	7.25	92.9	918.0	7.86	8.2	7.25	160.6	978.1	8.87	7.1
24	2.33	41.2	575.8	6.94	13.7	2.61	47.9	594.4	7.29	13.1	3.08	112.8	574.6	6.82	11.7
25	2.05	29.9	593.7	6.07	13.9	2.18	35.0	601.8	6.40	13.4	2.94	113.3	661.4	8.25	10.5
26	6.39	60.4	871.4	5.24	9.0	7.27	64.4	877.0	5.40	8.9	7.66	148.2	913.4	7.13	7.6
27	3.16	70.0	666.9	8.17	11.3	3.43	79.4	709.9	8.07	10.5	4.39	175.1	699.7	7.57	9.0
28	2.97	35.5	656.9	5.76	12.3	3.32	38.1	661.2	6.71	12.1	4.04	114.8	718.1	7.64	9.7
29	5.95	78.1	818.2	6.72	9.2	6.30	70.3	847.7	6.82	9.1	6.66	135.2	859.5	7.59	8.1
30	2.51	48.0	585.5	7.32	13.3	2.77	63.4	614.2	7.50	12.3	3.68	149.9	580.9	6.56	10.7
31	2.31	45.8	610.0	5.77	12.9	2.43	50.8	627.3	6.79	12.4	3.37	131.2	700.6	6.73	9.7
32	6.85	74.3	958.3	5.96	8.1	7.02	72.0	909.2	5.86	8.5	7.60	165.1	977.9	6.07	7.0
CALC.	2.63	43.1	611.4	6.45	12.9	2.83	45.3	619.7	6.78	12.7	3.35	82.6	727.2	7.62	10.2
BAG	3.19	62.3	662.2	5.89	11.5	3.36	65.6	690.9	6.36	11.0	4.17	124.8	818.5	6.85	8.6
IDLE	1.06	15.6	90.2	0.07	75.1	1.22	16.4	89.2	0.09	74.6	1.12	17.5	82.0	0.10	78.4
5MPH	10.53	190.9	1206.0	0.84	5.8	11.81	196.2	1140.8	0.85	6.0	13.22	206.2	1070.0	1.35	6.2
10MPH	4.13	79.9	827.8	0.68	9.2	4.57	77.3	766.6	0.69	9.8	4.43	80.3	818.1	0.69	9.3
15MPH	2.55	52.0	601.4	0.59	12.8	2.85	48.7	582.6	0.81	13.3	2.72	48.1	600.5	0.71	13.0
30MPH	1.61	19.9	455.4	2.11	18.0	1.84	19.3	429.5	2.12	19.1	1.89	12.1	514.9	4.13	16.4
45MPH	1.30	5.8	497.6	4.34	17.4	1.38	5.5	488.8	5.54	17.7	1.60	6.0	647.4	7.24	13.4
60MPH	1.34	10.7	566.8	10.32	15.1	1.42	12.4	564.2	10.35	15.1	1.76	18.8	744.8	11.18	11.4

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

TABLE 14 CONT'D

SUMMARY OF LOADED VEHICLE TESTS ON
FORTY-TWO 1967-1973 MODEL YEAR VEHICLES

DETROIT

MODAL EMISSION TEST PROCEDURE

MODE NO.	FIRST TEST HC	CO	CO2	NOX	FUEL ECON	SECOND TEST HC	CO	CO2	NOX	FUEL ECON	THIRD TEST HC	CO	CO2	NOX	FUEL ECON
1	8.08	81.6	503.8	4.41	13.5	6.87	85.7	502.8	4.71	13.5	7.45	99.8	535.1	4.90	12.4
2	7.89	71.2	641.9	4.80	11.4	6.71	75.4	685.5	5.20	10.8	7.68	88.1	721.5	[illegible]	10.0
3	13.82	132.7	920.0	4.95	7.6	12.18	137.6	960.5	5.52	7.3	13.75	153.4	1015.7	7.11	[illegible]
4	5.63	56.2	527.2	4.54	14.0	5.00	57.4	541.0	4.97	13.7	5.85	63.0	593.6	6.05	[illegible]
5	3.89	34.3	484.9	6.39	16.1	3.62	34.3	499.3	6.94	15.7	4.36	44.7	563.7	8.24	13.7
6	3.87	27.6	456.6	5.49	17.3	3.58	29.9	468.3	5.83	16.9	4.72	42.4	579.1	[illegible]	13.4
7	4.96	73.6	510.9	6.59	13.8	5.08	82.5	524.1	6.54	13.2	5.52	106.1	600.5	7.59	[illegible]
8	4.51	61.3	516.2	6.84	14.2	4.57	71.1	538.1	6.76	13.4	[illegible]	[illegible]	703.3	[illegible]	9.7
9	4.57	46.1	514.7	8.24	14.8	4.63	54.0	523.8	8.05	14.2	5.73	[illegible]	650.0	[illegible]	10.6
10	5.36	38.1	557.2	8.10	14.0	5.29	44.0	576.5	8.02	13.4	6.75	104.5	778.6	11.34	[illegible]
11	5.51	80.1	572.4	8.00	12.4	5.87	98.4	583.3	7.94	11.7	6.75	[illegible]	680.3	[illegible]	[illegible]
12	6.36	68.8	690.9	9.90	11.1	6.74	70.0	728.9	10.03	[illegible]	7.94	196.6	[illegible]	13.29	[illegible]
13	6.43	82.0	659.8	9.74	11.0	6.90	100.8	685.7	9.85	[illegible]	7.72	[illegible]	[illegible]	[illegible]	[illegible]
14	4.66	44.1	513.0	7.36	14.0	4.89	52.9	533.9	7.41	[illegible]	5.65	136.4	694.8	9.52	10.2
15	[illegible]	54.6	549.6	4.73	13.4	5.33	59.4	548.8	4.78	[illegible]	[illegible]	89.7	689.[illegible]	[illegible]	[illegible]
16	18.85	157.7	1064.5	6.32	6.4	19.54	163.8	[illegible]	6.41	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
17	5.76	68.3	528.0	6.96	13.6	5.96	80.7	549.2	7.36	[illegible]	[illegible]	[illegible]	[illegible]	7.51	[illegible]
18	5.05	46.1	556.4	6.59	13.8	[illegible]	52.7	580.1	6.60	13.1	6.30	84.7	690.7	8.56	[illegible]
19	5.49	59.6	521.0	6.50	14.1	5.66	70.1	[illegible]	6.85	[illegible]	6.75	[illegible]	[illegible]	[illegible]	[illegible]
20	6.37	55.6	660.4	7.57	11.6	5.73	65.7	[illegible]	7.71	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
21	6.37	105.8	611.7	6.96	10.7	6.79	105.3	676.7	6.67	[illegible]	7.61	201.1	[illegible]	[illegible]	[illegible]
22	[illegible]	[illegible]	537.8	7.76	[illegible]	[illegible]	47.8	661.1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
23	10.70	107.0	798.8	[illegible]	[illegible]	11.87	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
24	4.43	44.6	523.1	[illegible]	[illegible]	[illegible]	[illegible]	538.4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
25	4.20	36.5	519.0	7.77	15.1	4.45	42.7	529.0	7.77	[illegible]	[illegible]	101.4	[illegible]	[illegible]	10.5
26	[illegible]	74.6	779.7	[illegible]	[illegible]	11.38	77.9	[illegible]	7.15	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
27	[illegible]	68.7	596.8	[illegible]	[illegible]	6.54	84.7	627.1	4.29	11.[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
28	[illegible]	87.4	585.[illegible]	[illegible]	[illegible]	6.34	102.7	[illegible]	8.02	[illegible]	6.95	130.4	[illegible]	[illegible]	9.4
29	[illegible]	[illegible]	731.0	[illegible]	[illegible]	[illegible]	93.6	[illegible]	8.82	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
30	4.49	53.9	536.0	[illegible]	14.0	4.86	71.4	551.4	[illegible]	13.1	5.71	[illegible]	[illegible]	7.23	10.8
31	[illegible]	[illegible]	[illegible]	7.28	[illegible]	4.77	62.3	[illegible]	7.46	13.3	[illegible]	[illegible]	670.7	8.73	[illegible]
32	10.63	85.7	779.2	[illegible]	[illegible]	11.35	96.7	749.4	[illegible]	[illegible]	13.44	159.8	[illegible]	[illegible]	[illegible]
CALC.	4.74	63.3	546.5	[illegible]	11.9	4.37	[illegible]	[illegible]	7.45	[illegible]	5.61	[illegible]	[illegible]	[illegible]	[illegible]
BAG	5.47	64.2	589.5	7.13	[illegible]	5.71	76.1	[illegible]	7.34	11.7	7.16	[illegible]	739.4	[illegible]	[illegible]
IDLE	[illegible]	17.1	82.9	[illegible]	78.[illegible]	1.17	16.8	[illegible]	[illegible]	79.1	1.14	[illegible]	[illegible]	[illegible]	[illegible]
5MPH	[illegible]	199.9	1042.1	1.49	[illegible]	12.57	146.0	1034.1	[illegible]	[illegible]	13.48	[illegible]	[illegible]	1.71	[illegible]
10MPH	[illegible]	78.1	667.3	[illegible]	[illegible]	5.76	[illegible]	647.5	[illegible]	[illegible]	[illegible]	87.2	[illegible]	[illegible]	[illegible]
15MPH	[illegible]	[illegible]	517.5	[illegible]	14.2	4.83	57.0	515.1	[illegible]	14.6	[illegible]	57.7	[illegible]	[illegible]	[illegible]
30MPH	[illegible]	23.3	335.6	[illegible]	20.1	[illegible]	23.2	395.4	[illegible]	20.1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
45MPH	2.74	18.7	448.9	5.33	18.2	2.90	18.6	458.4	[illegible]	17.8	1.44	[illegible]	[illegible]	[illegible]	[illegible]
60MPH	[illegible]	21.4	513.5	[illegible]	15.9	[illegible]	22.1	514.7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

AUTOMOTIVE TESTING LABORATORIES,INC.
[illegible] E. COLFAX, AURORA, COLO. [illegible]

3.6 DISCUSSION OF SOUND LEVEL TEST RESULTS

Sound level test results as obtained from 85 San Antonio area vehicles are presented in Table 15 (one page). Data indicate small differences in average sound levels from model-year to model-year for each of the operating modes. In comparing sound levels by mode, however, the WOT acceleration of SAE J 986a resulted in the highest level at 72.0 db followed by the 60 mph cruise at 69.4 db, the 40 mph cruise at 64.0 db and the 20 mph cruise at 56.8 db. The idle mode, with measurements taken relatively close to the vehicle, does not apply in this comparison.

TABLE 15

SUMMARY OF SOUND LEVEL TESTS
BY MODEL YEAR

DECIBELS

MODEL YEAR	# OF VEH.	AMB.	ACCELERATION WOT	ACCELERATION 1/4G	IDLE	---CRUISE (MPH)--- 20	40	60
1968	2	40.5	69.5	65.5	61.0	58.0	64.5	69.0
1969	10	38.8	74.1	68.1	59.6	57.9	65.1	70.9
1970	5	40.6	70.6	67.6	59.2	57.0	63.8	69.4
1971	11	38.6	74.6	67.7	58.5	56.4	63.9	70.1
1972	19	38.7	71.3	66.4	59.2	56.8	64.1	69.4
1973	23	38.7	72.5	[illegible]	59.1	56.5	64.0	69.2
1974	15	38.7	69.5	68.3	59.1	56.7	63.4	68.8
TOTALS	85	38.8	72.0	67.0	59.2	56.8	64.0	69.4

Appendix A - Listing of Vehicle and Test Parameters

Legend

VEH - Vehicle Number

RUN - Run Number

DATE - Date of Test (month, day, year)

YR - Model Year

MAKE - Vehicle Make

MODL - Vehicle Model

C - Number of Cylinders

CID - Engine Displacement in Cubic Inches

V - Number of Carburetor Venturis (0:fuel injection)

T - Type of Transmission (1: automatic, 3: 3-speed manual, 4: 4-speed manual, 5: 5 speed manual)

A - Air Conditioning? (1 : yes, 2 : no)

FT - Fuel Tank Capacity in Gallons

IRPM - Idle RPM

P - PCV System Operational (1: yes, 2: no)

DW - Ignition Point Dwell in Degrees (99: electronic ignition)

IGN - Ignition Timing in Degrees (+ indicates before top dead center; - indicates after top dead center)

TESTS - Additional test performed on this Vehicle
  1 : Modal Emissions Tests
  3 : Tests on A/C Vehicles
  4 : Evaporative Emissions Tests
  6 : Tests on Loaded Vehicles

INRT - Dynamometer Inertia Weight Setting

RLHP - Road Load Horsepower Setting

L - Was 10% added RLHP added to Simulate Air-Conditioner? (1: yes, 2: no)

DB - Dry-Bulb Temperature (degrees Fahrenheit)

WB - Wet Bulb Temperature (degrees Fahrenheit)

BAROM - Barometric Pressure (inches Hg)

Pages 96 and 97 are Blank.

APPENDIX A

LISTING OF VEHICLE AND TEST PARAMETERS

DENVER

VEH	RUN	DATE	YR	MAKE	MODL	C	CID	V	T	A	FT	IRPM	P	DW	IGN	TESTS	INRT	RLHP	L	DB	WB	BAROM
001	D073	050774	74	BUIC	RIVI	8	455	4	1	1	26	0500	1	99	+04	1	5000	14.7	1	68	50	24.55
002	D020	042374	74	CHEV	CAPR	8	400	2	1	1	26	0640	1	30	+08	1	4500	14.0	1	74	50	24.73
003	D017	042274	74	CHEV	NOVA	8	350	4	1	1	21	0450	1	30	+08	1	3500	12.3	1	75	51	24.72
004	D084	050974	74	DODG	DART	8	318	2	1	2	16	0670	1	37	+03	1	3500	12.3	1	74	49	24.36
005	D235	071174	75	FORD	MAVE	8	302	2	1	1	15	0710	1	28	+05	1	3000	10.3	2	80	61	24.80
006	D072	042474	74	FORD	TORI	8	351	2	1	1	22	0630	1	27	+08	1	4000	13.2	1	69	50	24.71
007	D008	041974	74	OLDS	CUTL	8	350	4	1	1	22	0800	1	30	+12	1	4000	13.2	1	82	53	[illegible]
008	D019	042374	74	PLYM	SCAM	8	318	2	1	2	16	0600	1	37	+04	1	3500	12.3	1	69	57	24.73
009	D015	042274	74	PONT	CATA	8	400	2	1	1	26	0640	1	29	+10	1	4500	14.0	1	69	47	24.73
010	D021	042474	74	VOLK	SEDA	4	097	1	4	2	11	1040	1	50	+10	1	2000	8.3	2	69	49	24.68
011	D219	070274	73	AMMO	GREM	6	232	1	1	2	21	0580	1	30	+06	1,4	3000	11.3	1	79	57	24.74
012	D057	050374	73	BUIC	CENT	8	350	4	1	1	22	0780	1	34	+12	1	4000	13.2	1	76	55	24.60
013	D040	042074	73	BUIC	RIVI	8	455	4	1	1	26	0580	1	31	+08	1	5000	14.7	1	78	56	24.63
014	D075	050874	73	CADI	FLEE	8	472	4	1	1	28	0520	1	30	+08	1	5500	15.8	1	74	52	24.52
015	D077	050874	73	CAPR	SEDA	6	155	2	1	1	12	0650	1	38	+08	1	2500	9.4	2	78	57	24.67
016	D248	071674	73	CHEV	VEGA	4	140	1	1	1	11	0700	1	32	+11	1,4	2500	9.4	2	77	60	24.79
017	D239	071574	73	CHEV	NOVA	6	250	1	1	1	21	0850	1	39	+06	1,4	3500	11.2	2	83	61	24.80
018	D068	050674	73	CHEV	NOVA	8	307	2	1	1	21	0500	1	29	+10	1	3500	11.2	2	69	51	24.61
019	D050	050374	73	CHEV	NOVA	8	350	2	1	1	21	0930	1	27	[illegible]	1	3500	12.3	1	64	50	24.66
020	D237	070874	73	CHEV	MALI	8	350	2	1	1	22	0700	1	30	+08	1,4	4000	12.0	1	77	59	24.77
021	D213	062874	73	CHEV	MALI	8	350	2	1	1	22	[illegible]	1	29	+12	1,4	4000	13.2	1	81	57	24.54
022	D083	050874	73	CHEV	MONT	8	350	4	1	1	26	0710	1	28	+10	1	4000	13.2	1	71	47	24.78
023	D195	062174	73	CHEV	CAPR	8	400	2	1	1	26	0520	1	30	+08	1,4	4500	14.0	1	82	61	24.78
024	D031	042674	73	CHRY	NEWP	8	400	2	1	1	23	0450	1	42	+08	1	4500	14.0	1	64	51	24.83
025	D052	050274	73	DATS	1200	4	071	2	4	2	10	1000	1	50	[illegible]	1	2000	[illegible]	2	72	52	24.67
026	D196	062174	73	DODG	DART	6	225	1	1	1	16	[illegible]	1	[illegible]	[illegible]	1,4	3500	10.3	2	75	62	24.73
027	D033	042974	73	DODG	CHAR	8	318	2	1	1	20	[illegible]	1	31	[illegible]	1	4000	13.2	1	69	48	[illegible]
028	D231	070974	73	FORD	PINT	4	097	2	4	2	11	[illegible]	1	38	[illegible]	1,4	2500	9.4	2	75	59	[illegible]
029	D079	050874	73	FORD	MAVE	6	[illegible]	1	1	1	15	[illegible]	1	34	+06	1	3000	10.3	2	72	54	24.61
030	D241	071274	73	FORD	MAVE	8	302	2	1	1	15	[illegible]	1	[illegible]	[illegible]	1	3500	11.3	2	71	63	24.76
031	D211	062774	73	FORD	TORI	8	351	2	1	1	22	[illegible]	1	[illegible]	+08	1,4	4000	13.2	1	78	57	[illegible]
032	D216	070174	73	FORD	TORI	8	351	2	1	1	23	[illegible]	1	27	[illegible]	1,4	4000	13.2	1	82	[illegible]	[illegible]
033	D246	070374	73	FORD	STAW	8	400	2	1	1	21	[illegible]	1	24	+08	1,4	5000	14.7	1	81	62	[illegible]
034	D227	062874	73	FORD	LTD	8	400	2	1	1	22	[illegible]	1	30	+08	1,4	4500	14.0	1	[illegible]	57	[illegible]
035	D222	070374	73	MAZD	RX	2	070	4	4	1	12	[illegible]	1	48	[illegible]	1,4	[illegible]	9.4	2	83	59	24.77
036	D243	071574	73	MERC	BROU	8	429	4	1	1	26	[illegible]	1	29	+14	1,4	4000	13.2	1	85	64	24.70
037	D208	062774	73	OLDS	CUTL	8	350	4	1	1	22	[illegible]	1	29	+08	1,4	4000	13.2	1	79	58	24.67
038	D220	070274	73	OLDS	CUTL	8	455	4	1	1	26	[illegible]	1	31	+08	1,4	4000	13.2	1	76	56	24.82
039	D240	071274	73	PLYM	VALI	8	318	2	1	1	16	[illegible]	1	40	+10	1,4	3500	11.2	2	77	62	[illegible]
040	D232	071074	73	PLYM	FURY	8	360	2	1	1	23	[illegible]	1	43	[illegible]	1,4	4500	14.0	1	84	61	[illegible]
041	D047	050174	73	PONT	LEMA	8	350	2	1	1	22	[illegible]	1	30	[illegible]	1	4000	13.2	1	74	51	24.49
042	D207	062674	73	PONT	CATA	8	400	2	1	1	26	[illegible]	1	30	+12	1,4	4500	14.0	1	76	58	24.68
043	D055	050274	73	TOYO	CORO	4	120	2	1	2	12	[illegible]	1	50	+12	1	2500	9.4	2	64	52	24.78
044	[illegible]	062574	73	VOLK	SEDA	4	097	1	4	2	11	[illegible]	1	50	+08	1,4	2250	8.8	2	82	59	24.64
045	D076	050874	73	VOLK	STAW	4	[illegible]	1	4	1	10	[illegible]	1	[illegible]	+10	1	2250	9.4	2	76	58	24.58
046	D080	050974	72	BUIC	SKYL	8	350	2	1	1	19	[illegible]	1	32	+08	1	3500	12.3	1	76	52	24.58
047	D018	042274	72	BUIC	CENT	8	455	4	1	1	24	[illegible]	1	[illegible]	+06	1	4500	14.0	1	75	68	24.73
048	[illegible]	042274	72	CHEV	VEGA	4	140	1	1	2	11	[illegible]	1	30	+08	1	2500	9.4	2	73	50	[illegible]
049	D024	042674	72	CHEV	NOVA	6	250	1	1	2	16	1200	1	28	+08	1	3000	11.3	2	70	46	[illegible]
050	D011	041874	72	CHEV	NOVA	8	307	2	1	2	16	[illegible]	1	26	[illegible]	1	3500	11.2	2	65	50	24.74
051	D007	041874	72	CHEV	IMPA	8	350	2	1	1	24	[illegible]	1	22	+06	1	4500	14.0	1	70	48	[illegible]
052	D006	041874	72	CHEV	NOVA	8	350	2	1	1	19	[illegible]	1	[illegible]	+12	1	4000	12.3	1	68	53	[illegible]
053	D257	072274	72	CHEV	IMPA	8	350	2	1	1	24	[illegible]	1	23	+08	1	4500	14.0	1	72	61	24.73
054	D093	051074	72	CHEV	STAW	8	400	2	1	1	27	[illegible]	1	28	+08	1	5000	14.7	1	78	56	[illegible]
055	D025	042574	72	DATS	SEDA	4	097	2	4	2	13	[illegible]	1	56	+10	1	2250	8.8	2	68	53	[illegible]
056	D032	042674	72	DODG	DART	8	318	2	1	1	18	[illegible]	1	29	+08	1	3000	13.2	2	77	57	24.80
057	D026	042574	72	DODG	POLA	8	360	2	1	1	23	0560	1	31	[illegible]	1	4000	13.2	1	68	56	24.44
058	D037	042974	72	FORD	PINT	4	122	2	4	2	11	0650	1	40	+12	1	2250	8.8	2	69	51	24.79
059	D012	041874	72	FORD	MAVE	8	302	2	1	1	15	0560	1	37	+04	1	3000	10.3	2	72	50	24.78
060	D028	042674	72	FORD	TORI	8	351	2	1	1	22	0600	1	19	+12	1	4000	12.0	1	69	48	24.73

LISTING OF VEHICLE AND TEST PARAMETERS

DENVER

VEH	RUN	DATE	YR	MAKE	MODL	C	CID	V	T	A	FT	IRPM	P	DW	IGN	TESTS	INRT	RLHP	L	DB	WB	BAROM
061	D064	050674	72	FORD	STAW	8	351	2	1	1	21	0600	1	31	+12	1	4500	14.0	1	70	51	24.60
062	D071	050774	72	FORD	LTD	8	400	2	1	1	22	0580	1	26	+04	1	4500	14.0	1	72	52	24.58
063	D251	071774	72	FORD	THUN	8	429	4	1	1	22	0640	1	25	+10	1	4500	14.0	1	81	62	24.87
064	D082	050874	72	LINC	CONT	8	460	4	1	1	23	0580	1	29	+00	1	5000	14.7	1	72	53	24.52
065	D036	042974	72	MERC	MONT	8	400	2	1	2	21	0705	1	30	+05	1	5000	14.7	1	68	50	24.89
066	D065	050674	72	OLDS	CUTL	8	350	4	1	1	20	0580	1	28	+10	1	4000	13.2	1	70	50	24.61
067	D185	053074	72	OLDS	DELT	8	455	4	1	1	19	0580	1	31	+08	1	4500	14.0	1	69	50	24.77
068	D042	043074	72	OPEL	1900	4	116	2	4	2	11	0740	1	58	+00	1	2500	9.4	2	68	48	24.63
069	D086	051074	72	PLYM	DUST	6	198	1	1	2	16	0540	1	41	+10	1	3000	10.3	2	71	52	24.40
070	D041	043074	72	PLYM	SATE	8	318	2	1	1	21	0540	1	29	+02	1	3500	12.3	1	70	50	24.70
071	D056	050274	72	PONT	LEMA	8	350	2	1	2	20	0500	1	31	+08	1	3500	12.3	1	72	55	24.59
072	D044	050174	72	PONT	BONN	8	455	2	1	1	25	0660	1	30	+14	1	4500	14.0	1	72	54	24.55
073	D046	050174	72	TOYO	CORO	4	097	2	1	2	13	0660	1	52	+10	1	2250	8.8	2	70	48	24.50
074	D063	043074	72	VOLK	SEDA	4	097	1	4	2	11	1200	1	60	+04	1	2000	8.3	2	70	53	24.59
075	D067	050674	72	VOLK	SEDA	4	097	1	4	2	11	1200	1	56	-05	1	2000	8.3	2	73	55	24.59
076	D050	050274	71	AMMO	STAW	8	304	2	1	2	17	0580	1	32	+04		4000	12.0	2	72	53	24.44
077	D134	051774	71	BUIC	SKYL	8	350	2	1	1	19	0600	1	27	+04		3500	12.3	1	74	58	24.58
078	D058	050374	71	BUIC	ELEC	8	455	4	1	1	24	0580	1	30	+08		4500	14.0	1	70	51	24.60
079	D119	051574	71	CADI	DEVI	8	472	4	1	1	27	0620	1	28	+10		5000	14.7	1	70	48	24.51
080	D107	051474	71	CHEV	VEGA	4	140	1	1	2	11	0640	1	30	+08		2500	9.4	2	72	52	24.40
081	D166	052174	71	CHEV	MALI	8	307	2	1	2	20	0500	1	27	+09		3500	11.2	2	76	47	24.82
082	D133	051674	71	CHEV	NOVA	8	350	2	1	1	16	0540	1	30	+02		3500	11.2	2	70	54	24.45
083	D253	071874	71	CHEV	MALI	8	350	2	1	1	19	0600	1	27	+04		3500	12.3	1	86	64	24.67
084	D148	051874	71	CHEV	IMPA	8	350	2	1	1	24	0570	1	29	+10		4000	13.2	1	77	46	24.45
085	D132	051674	71	CHEV	IMPA	8	400	2	1	1	24	0580	1	25	+05		4000	13.2	1	72	58	24.45
086	D163	052174	71	CHRY	300	8	440	4	1	1	23	0580	1	27	+06		4500	14.0	1	70	51	24.70
087	D094	051174	71	DATS	SEDA	4	071	2	4	2	10	1100	1	46	+08		2000	8.3	2	76	53	24.33
088	D138	051774	71	DODG	VAN	8	318	2	1	2	25	0540	1	27	+04		4000	13.2	1	72	54	24.52
089	D128	051674	71	FORD	PINT	4	122	2	4	2	11	1000	1	48	+10		2250	8.8	2	72	55	24.43
090	D045	050174	71	FORD	MAVE	6	200	1	1	2	15	0580	1	33	+10		2750	9.9	2	70	50	24.51
091	D070	050774	71	FORD	STAW	8	302	2	1	2	18	0560	1	29	+10		4000	12.0	2	72	52	24.59
092	D118	050874	71	FORD	MUST	8	351	2	1	2	20	0480	1	28	+05		3500	12.3	1	71	50	24.41
093	D109	051474	71	FORD	THUN	8	429	4	1	1	23	0580	1	33	+10		4500	14.0	1	72	52	24.41
094	D103	051374	71	MERC	MONT	8	400	2	1	1	22	0620	1	29	+12		4500	14.0	1	72	48	24.49
095	D124	051674	71	OLDS	CUTL	8	350	2	1	1	20	0580	1	30	+10		3500	12.3	1	75	57	24.43
096	D140	051774	71	OLDS	DELT	8	455	2	1	1	25	0620	1	34	+04		4500	14.0	1	76	58	24.54
097	D255	071974	71	PLYM	SCAM	6	225	1	1	2	17	0660	1	30	+07		3000	10.3	2	79	61	24.87
098	D039	043074	71	PLYM	SATE	8	318	2	1	1	21	0580	1	28	+06		3500	12.3	1	68	50	24.44
099	D121	051574	71	PONT	FIRE	8	350	2	1	1	17	0810	1	30	+12		4000	13.2	1	79	55	24.50
100	D111	051474	71	PONT	CATA	8	400	2	1	1	19	0610	1	33	+12		4500	14.0	1	74	49	24.34
101	D117	051574	71	TOYO	CORO	4	097	2	4	1	12	1200	1	52	+17		2000	8.3	2	72	50	24.40
102	D122	051574	71	VOLK	SEDA	4	097	1	4	2	11	1200	1	50	-03		2000	8.3	2	75	53	24.50
103	D030	042674	70	BUIC	STAW	8	455	4	1	1	24	0650	1	29	+20		5000	14.7	1	69	51	24.89
104	D174	052274	70	CHEV	STAW	6	250	1	3	2	18	1000	1	31	+12		4000	12.0	2	70	49	24.71
105	D147	051874	70	CHEV	NOVA	8	307	2	1	1	18	0600	1	27	-10		3500	11.2	2	75	47	24.45
106	D131	051674	70	CHEV	IMPA	8	350	2	1	1	23	0500	1	30	-11		4500	12.7	2	75	57	24.44
107	D069	050674	70	CHEV	IMPA	8	350	2	1	1	25	0610	1	31	+12		4000	13.2	1	69	52	24.60
108	D113	051474	70	CHEV	MALI	8	350	2	1	1	18	0440	1	30	-05		3500	12.3	1	77	50	24.31
109	D130	051674	70	CHEV	IMPA	8	400	2	1	1	25	0580	1	28	-10		4000	13.2	1	72	56	24.45
110	D027	042674	70	DODG	POLA	8	383	2	1	1	24	0510	1	29	+10		4500	14.0	1	69	46	24.53
111	D009	041974	70	FORD	MAVE	6	200	1	1	1	16	0510	1	30	+06		2750	9.9	2	76	51	24.26
112	D013	041974	70	FORD	MUST	8	302	2	1	2	22	0575	1	33	+06		3000	10.3	2	73	48	24.75
113	D014	042274	70	FORD	TORI	8	351	2	1	2	20	0560	1	27	+14		3500	11.2	2	69	46	24.73
114	D170	052274	70	FORD	CUST	8	351	2	3	1	24	0680	1	30	+06		4000	13.2	1	79	52	24.70
115	D038	042674	70	FORD	LTD	8	390	2	1	1	24	0625	1	28	+11		4000	13.2	1	70	50	24.85
116	D062	050374	70	MERC	MARQ	8	429	4	1	1	22	0500	1	34	+06		4500	14.0	1	70	49	24.61
117	D137	051774	70	OLDS	CUTL	8	350	2	1	1	20	0560	1	31	+08		4000	13.2	1	72	57	24.53
118	D135	051774	70	OLDS	TORO	8	455	4	1	1	24	0640	1	23	+06		4500	14.0	1	70	57	24.54
119	D106	051474	70	PLYM	FURY	8	318	2	1	2	24	0400	1	30	+00		4000	13.2	1	72	51	24.40
120	D249	071774	70	PLYM	FURY	8	318	2	1	1	24	0760	1	31	+00		4000	12.0	2	84	63	24.88

APPEN IX A,CONT'D

LISTING OF VEHICLE AND TEST PARAMETERS

DENVER

VEH	RUN	DATE	YR	MAKE	MODL	C	CID	V	T	A	FT	IRPM	P	DW	IGN	TESTS	INRT	RLHP	L	DB	WB	BAROM
121	D127	051674	70	PONT	LEMA	8	350	2	1	2	21	0580	1	29	+08		4000	13.2	1	72	57	24.42
122	D154	052074	70	PONT	STAW	8	400	2	1	1	24	0500	1	32	+00		5000	14.7	1	81	50	24.64
123	D259	073174	70	TOYO	CORO	4	116	2	4	1	12	1000	1	54	+06		2500	9.4	2	79	62	24.88
124	D112	051474	70	VOLK	SEDA	4	097	1	4	2	11	1220	1	50	+10		2000	8.3	2	78	52	24.34
125	D085	050974	69	AMMO	STAW	8	290	2	1	2	16	0550	1	28	-05		3000	11.3	1	71	52	24.34
126	D066	050674	69	BUIC	LESA	8	350	4	1	1	25	0600	1	34	+10		4000	13.2	1	71	50	24.60
127	D093	051074	69	CHEV	C10	6	250	1	3	2	20	0700	1	30	+00		4000	12.0	2	75	48	24.61
128	D139	051774	69	CHEV	MALI	8	307	2	1	2	20	0520	1	30	+02		3500	11.2	2	76	59	24.54
129	D146	051374	69	CHEV	STAW	8	327	2	3	2	22	0730	1	41	-04		4500	12.7	2	78	49	24.37
130	D043	043074	69	CHEV	IMPA	8	350	4	1	1	20	0610	1	32	+03		4000	12.0	2	68	44	24.65
131	D018	042374	69	CHEV	CAMA	8	350	4	1	1	18	0410	1	33	+00		3500	12.3	1	69	52	24.66
132	D167	052174	69	CHEV	STAW	8	427	4	1	1	22	0600	1	29	-07		4500	14.0	1	82	50	24.77
133	D104	051374	69	CHRY	NEWP	8	383	2	1	1	24	0440	1	28	+05		4500	14.0	1	76	47	24.49
134	D156	052074	69	DODG	DART	6	225	1	1	1	18	0480	1	31	+02		3000	10.3	2	74	46	24.65
135	D141	051774	69	FORD	FAIR	8	302	2	1	2	20	0600	1	24	+06		3500	11.2	2	78	58	24.54
136	D258	072274	69	FORD	MUST	8	302	2	1	1	20	0720	1	26	+07		3000	10.3	2	82	62	24.80
137	D116	051574	69	FORD	TORI	8	351	2	1	1	20	0520	1	27	+11		3500	11.2	2	72	51	24.39
138	D110	051474	69	FORD	TORI	8	351	2	1	1	20	0500	1	26	+10		3500	12.3	1	72	52	24.41
139	D098	051374	69	FORD	GALA	8	390	2	1	1	24	0640	1	29	+08		4000	13.2	1	70	50	24.40
140	D097	051374	69	MERC	MONT	8	390	2	1	1	24	0580	1	32	+04		4500	14.0	1	70	50	24.40
141	D049	050174	69	OLDS	98	8	455	2	1	1	25	0510	1	31	+08		4500	14.0	1	70	48	24.48
142	D115	051574	69	PLYM	FURY	8	318	2	1	1	24	0610	1	33	+06		4000	12.0	2	72	52	24.39
143	D142	051774	69	PONT	FIRE	8	350	2	4	2	19	0720	1	[illegible]	-11		3500	12.3	1	77	55	24.54
144	D136	051774	69	PONT	GTO	8	400	4	1	2	21	0620	1	[illegible]	+09		4000	13.2	1	70	54	24.53
145	D160	052174	69	VOLK	SEDA	4	091	1	4	2	10	1280	1	50	+10		2250	8.8	2	70	49	24.70
146	D169	052174	68	AMMO	JAVE	6	232	1	3	2	19	0840	1	21	-12		3000	10.3	2	66	45	24.71
147	D252	071874	68	BUIC	RIVE	8	430	4	1	1	21	0660	1	39	+08		4500	14.0	1	82	63	24.57
148	D153	052074	68	CADI	DEVI	8	472	4	1	1	26	0680	1	30	+10		5000	14.7	1	74	52	24.61
149	D096	051174	68	CHEV	STAW	6	230	1	3	2	18	0570	1	27	-03		3500	11.2	2	72	50	24.67
150	D171	052274	68	CHEV	STAW	8	307	2	3	2	22	0580	1	23	+10		4000	12.0	2	82	53	24.70
151	D155	052074	68	CHEV	CAMA	8	327	2	1	2	18	0600	1	33	-09		3500	11.2	2	74	46	24.64
152	D161	052074	68	CHEV	IMPA	8	307	2	1	1	25	0590	1	28	+10		4000	12.0	2	70	49	24.70
153	D145	051574	68	CHEV	MALI	8	396	4	4	2	22	1030	1	30	-10		3500	12.3	1	75	47	24.37
154	D256	071974	68	DODG	POLA	8	383	2	1	1	24	0800	1	27	+08		4000	13.2	1	70	63	24.57
155	D100	051074	68	FORD	MUST	6	200	1	1	2	20	0570	1	40	+15		3000	10.3	2	70	50	24.40
156	D173	052274	68	FORD	MUST	8	289	2	1	2	20	0580	1	24	+15		3000	10.3	2	72	48	24.71
157	D172	052274	68	FORD	MUST	8	302	4	4	2	20	0570	1	29	+10		3000	10.3	2	70	49	24.70
158	D072	050774	68	FORD	STAW	8	390	2	1	1	19	0600	1	23	+10		4500	14.0	1	68	50	24.55
159	D151	052074	68	MERC	COUG	8	302	2	1	2	17	0540	1	29	+09		3500	12.3	1	74	52	24.60
160	D157	052074	68	OLDS	CUTL	8	350	4	1	2	20	0520	1	35	+00		3500	12.3	1	80	48	24.67
161	D164	050274	68	PLYM	SATE	8	318	2	1	1	25	0480	1	29	+00		3500	11.2	2	70	5	24.70
162	D101	051374	68	PONT	GTO	8	400	4	1	1	22	0800	1	32	+06		4000	13.2	1	70	50	24.40
163	D105	051374	68	VOLK	SEDA	4	091	1	4	2	11	0460	1	44	+09		2000	8.3	2	73	47	24.40
164	D099	051074	67	AMMO	RAMB	6	232	1	1	2	16	0640	1	32	+10		3000	10.3	2	72	52	24.41
165	D078	050874	67	BUIC	SPEC	8	340	4	1	1	21	0700	1	34	+15		3500	11.2	2	79	59	24.56
166	D125	051674	67	CADI	FLEE	8	429	4	1	1	26	0620	1	34	-04		5000	14.7	1	74	57	24.43
167	D114	051474	67	CHEV	IMPA	6	250	1	3	2	24	0810	1	33	-03		4000	12.0	2	84	63	24.31
168	D150	052074	67	CHEV	IMPA	8	283	2	1	2	24	0610	1	26	+06		4000	12.0	2	70	50	24.60
169	D175	052274	67	CHEV	MALI	8	283	2	1	2	20	0430	1	25	-10		3500	11.2	2	72	46	24.71
170	D024	042574	67	CHEV	IMPA	8	327	4	1	1	17	0580	Z	29	+03		4000	13.2	1	69	50	24.55
171	D120	051574	67	CHRY	NEWP	8	383	2	1	1	24	0710	1	31	+11		4000	13.2	1	68	45	24.50
172	D165	052174	67	DODG	CORO	8	318	2	1	1	19	0520	1	30	+10		3500	11.2	2	74	47	24.67
173	D176	052174	67	FORD	CUST	8	289	2	3	2	25	0690	1	30	+09		3500	11.2	2	79	52	24.69
174	D090	051074	67	FORD	MUST	8	289	2	1	2	20	0510	1	26	+12		3000	10.3	2	76	50	24.62
175	D034	042974	67	FORD	GALA	8	390	2	1	1	[illegible]	0610	1	27	+08		4000	13.2	1	69	50	24.90
176	D152	052074	67	MERC	MONT	8	390	2	1	1	20	0610	1	29	+00		4000	13.2	1	73	52	24.61
177	D158	052074	67	OLDS	DELM	8	425	2	1	1	25	0500	1	26	+08		4500	14.0	1	69	45	24.67
178	D095	051174	67	PLYM	VALI	6	225	1	3	2	18	0620	1	40	+00		3000	10.3	2	70	50	24.27
179	D089	051074	67	PONT	TEMP	8	326	2	1	1	19	0695	1	28	+11		3500	11.2	2	76	50	24.62
180	D102	050374	67	VOLK	SEDA	4	091	1	4	2	10	[illegible]	1	54	+08		2000	8.3	2	72	46	24.40

APPENDIX A

LISTING OF VEHICLE AND TEST PARAMETERS

HOUSTON

VEH	RUN	DATE	YR	MAKE	MODL	C	CID	V	T	A	FT	IRPM	P	DW	IGN	TESTS	INRT	RLHP	L	DB	WB	BAROM
001	H061	031474	74	BUIC	LESA	8	455	4	1	1	26	0600	1	28	+08	1	4500	14.0	1	74	66	30.02
002	H155	032674	74	CHEV	NOVA	8	350	2	1	1	21	0520	1	29	+00	1	3500	11.2	2	74	63	30.21
003	H033	031274	74	CHEV	MALI	8	350	2	1	1	26	0580	1	31	+06	1	4000	13.2	1	82	70	30.09
004	H180	032874	74	DODG	CHAR	8	318	2	1	1	20	0580	1	29	+04	1	4000	13.2	1	82	62	29.84
005	H047	031374	74	FORD	TORI	8	302	2	1	1	26	0610	1	29	+02	1	4000	12.0	2	72	61	30.10
006	H054	031474	74	FORD	CUST	8	351	2	1	1	22	0650	1	27	+04	1	4500	14.0	1	68	63	30.07
007	H086	031874	74	OLDS	DELT	8	350	4	1	1	26	0640	1	31	+08	1	4500	14.0	1	78	70	29.93
008	H134	032274	74	PLYM	DUST	8	318	2	1	1	16	0660	1	37	+02	1	3500	12.3	1	76	57	30.20
009	H093	031874	74	PONT	CATA	8	400	2	1	1	26	0700	1	24	+14	1	4500	14.0	1	83	72	29.92
010	H022	030974	74	VOLK	SEDA	4	097	1	4	2	11	1250	1	48	-05	1	2250	8.8	2	72	69	30.07
011	H004	030674	73	AMMO	GREM	6	258	1	1	1	21	0670	1	32	+04	1	3000	11.3	1	82	68	30.07
012	H035	031[illegible]4	73	BUIC	STAW	8	350	2	1	1	22	0710	1	30	+06	1	4500	14.0	1	83	71	30.09
013	H151	032674	73	BUIC	ELEC	8	455	4	1	1	26	0720	1	27	+12	1	5000	14.7	1	73	62	30.15
014	H048	031374	73	CADI	DEVI	8	472	4	1	1	27	0650	1	29	+08	1	5500	15.3	1	68	60	30.10
015	H030	031174	73	CAPR	CAPR	4	122	2	1	1	12	0690	1	60	+10	1	2500	9.4	2	80	71	30.13
016	H080	031474	73	CHEV	VEGA	4	140	2	1	1	11	0610	1	34	+06	1	2500	9.4	2	77	70	30.03
017	H188	032874	73	CHEV	VEGA	4	140	2	1	1	11	0560	1	31	+12	1	2500	9.4	2	75	59	29.85
018	H178	032874	73	CHEV	CHEL	8	307	2	3	1	26	0900	1	30	+04	1	4000	12.0	2	81	72	29.96
019	H079	031674	73	CHEV	NOVA	8	307	2	1	1	21	0720	1	30	+06	1	3000	11.3	1	72	67	30.03
020	H097	031974	73	CHEV	MONT	8	350	2	1	1	19	0710	1	31	+08	1	4000	12.0	2	79	73	29.91
021	H012	030874	73	CHEV	CAMA	8	350	2	1	1	18	0620	1	31	+08	1,3	3500	12.3	1	80	72	30.09
022	H034	031274	73	CHEV	MALI	8	350	4	1	1	26	0500	1	27	+08	1	4000	13.2	1	80	70	30.08
023	H075	031474	73	CHEV	CAPR	8	400	2	1	1	17	0700	1	29	+12	1	4500	14.0	1	76	63	30.28
024	H116	032174	73	CHRY	NEWP	8	400	2	1	1	23	0650	1	37	-02	1	4500	14.0	1	74	54	30.20
025	H099	031974	73	DATS	DELU	4	071	2	1	1	10	1200	1	46	+10	1	2500	9.4	2	82	73	29.92
026	H147	032574	73	DODG	DART	6	225	1	1	1	16	0910	1	50	+12	1	3000	10.3	2	68	57	30.17
027	H064	031274	73	DODG	CHAR	8	318	2	1	1	18	0580	1	29	+06	1,3	4000	13.2	1	73	65	30.10
028	H092	031874	73	FORD	STAW	4	122	2	4	1	11	0820	1	40	+09	1	2750	9.9	2	80	70	29.94
029	H128	032174	73	FORD	MAVE	6	200	1	1	1	15	1300	1	34	+08	1	3000	10.3	2	76	57	30.15
030	H102	031974	73	FORD	MAVE	8	302	2	1	1	15	0550	1	25	+08	1	3000	11.3	1	78	70	29.91
031	H081	031674	73	FORD	MUST	8	351	2	1	1	20	0780	1	27	+06	1	3500	11.2	2	82	69	29.98
032	H006	030774	73	FORD	TORI	8	351	2	1	1	22	0760	1	30	+03	1,3	4000	13.2	1	76	70	30.08
033	H028	031174	73	FORD	LTD	8	400	2	1	1	2[illegible]	0700	1	20	+12	1,3	4500	14.0	1	83	72	30.08
034	H113	032174	73	FORD	STAW	8	400	2	1	1	2[illegible]	0600	1	29	+09	1	5000	14.7	1	76	55	30.19
035	H100	031974	73	MAZD	RX2	2	070	4	4	1	16	1000	1	60	+14	1	2750	9.9	2	74	69	29.89
036	H029	031174	73	MERC	MARQ	8	429	4	1	1	22	0640	1	25	+18	1	5000	14.7	1	73	69	30.00
037	H045	031374	73	OLDS	CUTL	8	350	4	1	1	22	0610	1	31	+04	1	4000	13.2	1	76	63	30.11
038	H070	031574	73	OLDS	DELT	8	455	4	1	1	26	0680	1	30	+06	1	4500	14.0	1	68	60	30.29
039	H105	032074	73	PLYM	SATE	8	318	2	1	1	19	0610	1	34	-01	1	4000	12.0	2	85	74	29.79
040	H136	032274	73	PLYM	FURY	8	360	2	1	1	23	0740	1	30	+01	1	4000	13.2	1	72	57	30.25
041	H008	030974	73	PONT	VENT	8	350	2	1	1	21	0510	1	27	+08	1	3500	12.3	1	75	69	30.07
042	H019	030974	73	PONT	BONN	8	400	2	1	1	26	0610	1	28	+05	1,3	4500	14.0	1	80	72	30.11
043	H107	032074	73	TOYO	CORO	4	120	2	4	1	13	0800	1	52	+00	1	2750	9.9	2	74	60	29.97
044	H197	032974	73	VOLK	SEDA	4	097	1	4	2	11	0900	1	60	+10	1	2250	8.8	2	81	64	29.86
045	H091	031974	73	VOLK	STAW	4	103	2	4	1	15	0900	1	52	+10	1	3000	10.3	2	75	70	29.93
046	H017	030874	72	BUIC	LESA	8	350	4	1	1	19	0610	1	30	+02	1	4500	14.0	1	76	70	30.14
047	H066	031574	72	BUIC	ELEC	8	455	4	1	1	24	0650	1	32	+06	1	5000	14.7	1	68	62	30.18
048	H177	032874	72	CHEV	VEGA	4	140	2	4	1	11	1200	1	32	+04	1	2500	9.4	2	81	72	29.96
049	H179	032874	72	CHEV	VEGA	4	140	2	3	1	11	1100	1	56	+08	1	2500	9.4	2	77	69	29.90
050	H026	031174	72	CHEV	NOVA	8	307	2	1	1	16	0530	1	20	+04	1	3500	11.2	2	80	71	30.03
051	H049	031374	72	CHEV	MONT	8	350	2	1	1	19	0600	1	29	+00	1	4000	13.2	1	70	61	30.10
052	H094	031974	72	CHEV	NOVA	8	350	2	1	1	16	0600	1	30	-06	1	3500	12.3	1	81	72	29.87
053	H141	032374	72	CHEV	STAW	8	350	4	1	1	18	0620	1	31	+08	1	4000	13.2	1	84	62	30.24
054	H039	031274	72	CHEV	IMPA	8	400	2	1	1	24	0500	1	31	+08	1	4500	14.0	1	76	62	30.16
055	H163	032774	72	DATS	STAW	4	097	2	4	1	11	1160	1	46	+10	1	2500	9.4	2	82	69	30.16
056	H077	031274	72	DODG	DART	8	318	2	1	1	16	0520	1	29	+08	1	3000	10.3	2	84	64	30.24
057	H159	032874	72	DODG	POLA	8	360	2	1	1	23	0740	1	31	+03	1	4000	13.2	1	72	62	30.23
058	H112	032074	72	FORD	PINT	4	122	2	4	1	11	0840	1	34	+00	1	2500	9.4	2	72	56	30.24
059	H007	030774	72	FORD	TORI	8	302	2	1	1	22	0680	1	32	+02	1	4000	12.0	2	80	70	30.07
060	H038	031374	72	FORD	GALA	8	351	2	1	1	21	0570	1	27	+06	1	4000	12.0	2	70	60	30.11

APPENDIX A,CONT'D

LISTING OF VEHICLE AND TEST PARAMETERS

HOUSTON

VEH	RUN	DATE	YR	MAKE	MODL	C	CID	V	T	A	FT	IRPM	P	DW	IGN	TESTS	INRT	RLHP	L	DB	WB	BAROM
061	H125	032274	72	FORD	GRAN	8	351	2	1	1	20	0580	1	26	+06	1	4000	13.2	1	84	68	29.91
062	H036	031274	72	FORD	STAW	8	400	2	1	1	21	0600	1	29	+03	1	4500	14.0	1	80	78	30.09
063	H121	032174	72	FORD	LTDB	8	429	4	1	1	21	0590	1	30	+07	1	4500	14.0	1	69	52	30.13
064	H095	031974	72	LINC	MRK4	8	460	4	1	1	22	0590	1	31	+06	1	5000	14.7	1	84	73	29.90
065	H072	031574	72	MERC	STAW	8	400	2	1	1	21	0520	1	30	+04	1	5000	14.7	1	82	64	30.26
066	H110	032074	72	OLDS	DELT	8	350	2	1	1	25	0700	1	30	+00	1	4500	14.0	1	70	56	30.19
067	H164	032774	72	OLDS	STAW	8	455	4	1	1	23	0610	1	30	+08	1	4500	14.0	1	73	65	30.17
068	H115	032174	72	OPEL	STAW	4	116	2	1	1	11	0610	1	56	+06	1	2500	9.4	2	75	55	30.16
069	H123	032274	72	PLYM	VALI	6	225	1	1	1	16	0790	1	41	+06	1	3000	10.3	2	78	64	29.95
070	H146	032574	72	PLYM	SATE	8	318	2	1	1	21	0850	1	37	+00	1	3500	12.3	1	69	58	30.25
071	H130	032274	72	PONT	VENT	8	350	2	1	1	16	0580	1	29	+12	1	3500	12.3	1	76	57	30.21
072	H144	032574	72	PONT	BONN	8	455	4	1	1	25	0640	1	27	+12	1	4500	14.0	1	81	61	30.27
073	[illegible]	031874	72	TOYO	CARI	4	097	2	1	1	11	0600	1	49	+00	1	2250	8.8	2	79	66	29.92
074	H132	032374	72	VOLK	SEDA	4	097	1	4	2	11	1120	1	50	+00	1	2250	8.8	2	78	58	30.24
075	H122	032274	72	VOLK	SEDA	4	097	1	4	1	11	1200	1	44	+00	1	2250	8.8	2	69	62	29.95
076	H104	031974	71	AMMO	JAVE	8	304	2	1	1	16	0700	1	30	+08		3500	11.2	2	85	72	29.87
077	H074	031674	71	BUIC	SKYL	8	350	2	1	1	19	0540	1	29	+08		3500	12.3	1	74	61	30.28
078	H101	031974	71	BUIC	ELEC	8	455	4	1	1	24	0600	1	31	+04		4500	14.0	1	76	71	29.90
079	H073	031674	71	CADI	SEDA	8	472	4	1	1	27	0640	1	26	+04		5000	14.7	1	68	58	30.28
080	H154	032674	71	CHEV	VEGA	4	140	1	3	1	11	0680	1	33	+04		2500	9.4	2	73	62	30.23
081	H108	032974	71	CHEV	MALI	8	307	2	1	1	24	0600	1	29	+08		3500	11.2	2	84	68	29.76
082	H103	031974	71	CHEV	IMPA	8	350	2	1	1	24	0500	1	30	+08		4000	12.8	2	81	71	29.92
083	H010	030774	71	CHEV	IMPA	8	350	2	1	1	24	0590	1	30	+09	3	4000	13.2	1	78	69	30.14
084	H195	032974	71	CHEV	MALI	8	350	2	1	1	24	0550	1	25	+06		3500	12.3	1	80	60	29.98
085	H145	032974	71	CHEV	IMPA	8	400	2	1	1	24	0620	1	27	+12		4000	13.2	1	70	56	30.18
086	H076	031674	71	CHRY	300	8	440	4	1	1	23	0560	1	34	-02		4500	14.0	1	82	64	30.26
087	H156	032274	71	DATS	Z110	4	071	2	4	1	10	1200	1	48	+10		2000	8.1	2	75	63	30.20
088	H111	032074	71	DODG	CHAR	8	318	2	1	1	21	[illegible]	1	30	+05		3500	12.3	1	70	55	30.25
089	H113	032074	71	FORD	PINT	4	122	2	4	1	11	0810	1	48	+06		2000	8.1	2	70	54	30.19
090	H098	031974	71	FORD	MAVE	6	200	1	1	1	15	[illegible]	1	36	+12		2750	9.3	2	75	72	29.90
091	H089	031874	71	FORD	TORI	8	302	2	1	1	20	0610	1	31	+06		3500	11.2	2	73	56	[illegible]
092	H016	030874	71	FORD	GALA	8	351	2	1	1	23	0590	1	33	+04	3	4000	13.2	1	76	72	[illegible]
093	H109	031974	71	FORD	BROU	8	429	4	1	1	23	0610	1	30	+10	3	4500	14.0	1	70	56	[illegible]
094	H133	032374	71	MERC	MONT	8	429	2	1	1	22	0720	1	34	+06		4500	14.0	1	78	68	30.24
095	H096	031974	71	OLDS	STAW	8	350	4	1	1	23	[illegible]	1	31	+08		4000	13.2	1	80	72	29.90
096	H021	030974	71	OLDS	98	8	455	4	1	1	26	0610	1	30	+14	3	4500	14.0	1	78	72	30.14
097	H158	032374	71	PLYM	DUST	6	225	1	1	1	17	0710	1	39	+04		3000	10.3	2	70	65	30.23
098	H002	030674	71	PLYM	SATE	8	318	2	1	1	21	0660	1	34	+04	3	3500	12.3	1	75	69	30.06
099	H043	031374	71	PONT	LEMA	8	350	2	1	1	16	0540	1	29	+10		3500	12.3	1	75	63	30.10
100	H137	032974	71	PONT	GRNP	8	400	2	1	1	19	0680	1	29	+10		4500	13.2	1	76	59	29.80
101	H184	032974	71	TOYO	CORO	4	071	2	4	1	12	1000	1	40	+06		2000	8.1	2	80	62	29.90
102	H018	030874	71	VOLK	SEDA	4	097	1	4	2	11	1010	1	50	+07		2250	8.8	2	80	71	30.11
103	H090	031874	70	BUIC	ELEC	8	455	4	1	1	20	0590	1	30	+06		4500	14.0	1	72	69	29.90
104	H055	031474	70	CHEV	CHEV	6	250	1	3	1	20	[illegible]	1	37	+07		3500	11.2	2	68	63	30.07
105	H175	032774	70	CHEV	CAMA	8	307	2	1	1	19	[illegible]	1	29	[illegible]		3500	11.2	2	76	68	30.03
106	H194	032974	70	CHEV	IMPA	8	350	2	1	1	17	0620	1	31	[illegible]		4000	12.8	2	70	58	29.98
107	H063	031474	70	CHEV	IMPA	8	350	2	1	1	17	0640	1	28	[illegible]		4000	13.2	1	72	68	30.08
108	H151	032974	70	CHEV	BELA	8	350	2	1	1	25	0640	1	36	+04		4000	13.2	1	69	58	30.03
109	[illegible]	032374	70	CHEV	STAW	8	400	2	1	1	22	0680	1	31	+04		4500	14.0	1	77	57	30.24
110	H040	031274	70	DODG	POLA	8	383	2	1	1	24	0500	1	32	+02		4000	13.2	1	70	62	30.19
111	H044	031374	70	FORD	MAVE	6	200	1	3	1	16	0700	1	38	+02		2750	9.3	2	75	63	30.10
112	H166	032774	70	FORD	FAIR	8	302	2	3	1	20	[illegible]	1	32	[illegible]		3500	11.2	2	74	66	30.16
113	H071	031374	70	FORD	CUST	8	351	2	1	1	24	0500	1	35	+06		4000	12.0	2	75	62	30.29
114	H193	032974	70	FORD	MUST	8	351	2	1	1	20	0500	1	32	+06		3000	11.1	1	74	58	29.98
115	H050	031374	70	FORD	STAW	8	390	2	1	1	24	0500	1	27	+06		4500	14.0	1	68	56	30.15
116	[illegible]	031674	70	MERC	MARQ	8	429	2	1	1	24	0560	1	33	+02		4500	14.0	1	78	70	29.92
117	[illegible]	032274	70	OLDS	CUTL	8	350	2	1	1	23	0610	1	30	+04		4000	13.2	1	74	56	30.21
118	[illegible]	032974	70	OLDS	DETL	8	455	2	1	1	25	0550	1	30	+08		4500	14.0	1	69	55	30.09
119	H009	030774	70	PLYM	FURY	8	318	2	1	1	25	0450	1	37	+07		4000	13.2	1	76	70	30.10
120	H046	031374	70	PLYM	FURY	8	318	2	1	1	24	0590	1	29	+08		4000	12.0	2	76	63	30.11

APPENDIX A, CONT'D

LISTING OF VEHICLE AND TEST PARAMETERS

HOUSTON

VEH	RUN	DATE	YR	MAKE	MODL	C	CID	V	T	A	FT	IRPM	P	DW	IGN	TESTS	INRT	RLHP	L	DB	WB	BAROM
121	H186	032874	70	PONT	FIRE	8	350	2	1	1	19	0680	1	28	+12		3500	12.3	1	79	61	29.91
122	H160	032674	70	PONT	CATA	8	400	2	1	1	26	0710	1	35	+04		4500	14.0	1	70	62	30.23
123	H176	032874	70	TOYO	STAW	4	116	2	1	1	12	0920	1	56	+00		2500	9.4	2	82	72	29.92
124	H162	032774	70	VOLK	SEDA	4	097	1	4	2	10	1160	1	54	-10		2000	8.3	2	83	70	30.14
125	H167	032774	69	AMMO	JAVE	8	290	2	1	1	19	0540	1	27	+05		3000	11.3	1	73	66	30.10
126	H142	032374	69	BUIC	SKYL	8	350	2	1	1	20	0650	1	31	+04		3500	12.3	1	78	59	30.26
127	H170	032774	69	CHEV	CAMA	6	250	1	1	1	18	0610	1	26	+06		3500	11.2	2	70	65	30.09
128	H062	031474	69	CHEV	STAW	8	307	2	1	1	18	0560	1	31	+03		4000	12.0	2	72	65	30.08
129	H150	032674	69	CHEV	NOVA	8	307	2	1	1	18	0720	1	25	+10		3000	10.3	2	73	62	30.16
130	H025	030974	69	CHEV	IMPA	8	350	4	1	1	25	0590	1	30	+04		4000	12.0	2	74	72	30.06
131	H015	030874	69	CHEV	IMPA	8	350	4	1	1	23	0450	1	25	+00	3	4000	13.2	1	74	69	30.07
132	H120	032174	69	CHEV	STAW	8	396	2	1	1	24	0540	1	19	-11		4500	14.0	1	72	55	30.03
133	H023	030974	69	CHRY	TOWN	8	383	2	1	1	23	0600	1	32	+07	3	5000	14.7	1	74	70	30.00
134	H167	032774	69	DODG	DART	6	225	2	1	1	18	0630	1	40	+00		3000	10.3	2	72	64	30.14
135	H053	031374	69	FORD	STAW	8	302	2	1	1	24	0400	1	33	+05		4500	12.7	2	69	65	30.04
136	H069	031674	69	FORD	MUST	8	302	2	1	1	20	0610	1	27	+08		3500	11.2	2	70	60	30.24
137	H174	032774	69	FORD	MUST	8	351	4	1	1	20	0560	1	32	+08		3000	10.3	2	76	69	30.10
138	H199	032974	69	FORD	STAW	8	351	4	1	1	19	0680	1	27	+06		4000	13.2	1	83	68	29.75
139	H005	030774	69	FORD	STAW	8	390	2	1	1	23	0560	1	29	+00	3	4500	14.0	1	80	72	30.06
140	H024	030974	69	MERC	MONT	8	390	2	1	1	21	0510	1	31	+06	3	5000	14.7	1	82	73	30.09
141	H011	030774	69	OLDS	DELT	8	455	2	1	1	21	0610	1	30	+05	3	4500	14.0	1	84	70	30.13
142	H087	031874	69	PLYM	BARR	8	318	2	1	1	18	0620	1	29	+04		3000	10.3	2	79	71	29.94
143	H169	032774	69	PONT	LEMA	8	350	2	1	1	21	0530	1	33	+04		3500	12.3	1	68	63	30.09
144	H032	031174	69	PONT	CATA	8	400	4	1	1	26	0510	1	22	+15		4500	14.0	1	86	72	30.09
145	H181	032874	69	VOLK	SEDA	4	091	1	4	2	11	1000	1	54	+00		2250	8.8	2	85	66	29.79
146	H153	032674	68	AMMO	RAMB	6	199	1	3	1	16	0560	1	20	+04		3000	10.3	2	76	63	30.22
147	H117	032174	68	BUIC	ELEC	8	430	4	1	1	21	0650	1	27	+00		4500	14.0	1	77	56	30.20
148	H078	031674	68	CADI	DEVI	8	472	4	1	1	24	0520	1	29	+08		5000	14.7	1	70	66	30.03
149	H052	031374	68	CHEV	CAMA	6	230	1	1	2	18	0450	1	22	+05		3500	11.2	2	69	65	30.14
150	H182	032874	68	CHEV	BELA	8	307	2	1	1	25	0560	1	26	+02		4000	12.0	2	81	64	29.80
151	H137	032274	68	CHEV	BELA	8	327	4	1	1	22	0600	1	32	+07		4500	12.7	2	69	56	30.29
152	H202	032974	68	CHEV	MALI	8	307	2	1	1	20	0500	1	31	+06		3500	11.2	2	78	66	29.74
153	H152	032574	68	CHEV	CAPR	8	396	4	1	1	25	0660	1	29	+08		4500	14.0	1	75	63	30.21
154	H119	032174	68	DODG	POLA	8	383	2	1	1	24	0490	1	31	+04		4000	13.2	1	71	54	30.16
155	H126	032174	68	FORD	MUST	6	200	1	1	1	20	0610	1	35	+14		3000	10.3	2	70	58	30.13
156	H183	032874	68	FORD	MUST	8	289	2	1	1	20	0560	1	28	+06		3500	11.2	2	77	61	29.80
157	H083	031474	68	FORD	FAIR	8	302	2	1	1	20	0630	1	28	+06		3500	11.2	2	82	70	29.92
158	H135	032274	68	FORD	STAW	8	390	2	1	1	24	0590	1	24	+07		4500	14.0	1	69	54	30.20
159	H189	032874	68	MERC	STAW	8	390	2	1	1	22	0520	1	21	+06		4500	14.0	1	73	58	29.86
160	H148	032574	68	OLDS	CUTS	8	350	2	1	1	20	0655	1	29	+09		3500	12.3	1	70	58	30.25
161	H001	030674	68	PLYM	FURY	8	318	2	1	1	25	0450	1	30	-05		3500	11.2	2	77	70	30.05
162	H201	032974	68	PONT	CATA	8	400	2	1	1	20	0500	1	30	+10		4000	13.2	1	83	68	29.75
163	H143	032374	68	VOLK	SEDA	4	091	1	4	2	11	0920	1	58	+04		2000	8.3	2	74	58	30.26
164	H127	032174	67	AMMO	REBE	6	232	2	1	1	21	0510	1	35	+07		3500	11.2	2	69	55	30.16
165	H106	032074	67	BUIC	LESA	8	340	4	1	1	24	0580	1	36	-06		4000	12.0	2	78	64	29.90
166	H149	032574	67	CADI	DEVI	8	429	4	1	1	26	0630	1	35	+10		5000	14.7	1	72	56	30.17
167	H173	032774	67	CHEV	CHEL	6	250	1	3	2	20	0730	1	24	+04		3000	10.3	2	73	66	30.10
168	H171	032774	67	CHEV	IMPA	8	283	2	1	1	24	0420	1	33	+10		4000	12.0	2	71	66	30.09
169	H190	032874	67	CHEV	BISC	8	283	2	1	1	24	0600	1	20	+10		4000	12.0	2	69	58	29.90
170	H014	030874	67	CHEV	CAPR	8	327	4	[illegible]	[illegible]	20	0580	1	22	+12	3	4000	13.2	1	80	70	30.08
171	H027	031174	67	CHRY	NEWP	8	383	2	[illegible]	1	24	0600	1	30	+06	3	4000	13.2	1	79	71	30.06
172	H114	032074	67	DODG	CORO	8	318	2	1	1	19	0810	1	30	+09		3500	11.2	2	73	57	30.17
173	H165	032774	67	FORD	CUST	8	289	2	1	1	25	0500	1	28	[illegible]		4000	12.0	2	71	65	30.16
174	H172	032774	67	FORD	MUST	8	289	2	1	1	20	0600	1	27	+06		3000	10.3	2	72	66	30.09
175	H031	031174	67	FORD	LTD	8	390	4	1	1	24	0590	1	35	+07	3	3500	12.3	1	82	72	30.15
176	H037	031274	67	MERC	STAW	8	428	4	1	1	17	0630	1	28	-04	3	4500	14.0	1	77	63	30.12
177	H003	030674	67	OLDS	98	8	425	4	1	1	24	0645	1	27	+11	3	4500	14.0	1	82	69	30.12
178	H124	032274	67	PLYM	BARR	6	225	1	3	1	18	0750	1	30	+09		3000	10.3	2	84	68	29.91
179	H108	032074	67	PONT	LEMA	8	326	2	1	1	19	0570	1	30	+06		3500	11.2	2	70	56	29.99
180	H185	032974	67	VOLK	SEDA	4	091	1	4	2	11	0960	1	44	+10		2000	8.3	2	82	62	29.89

APPENDIX A

LISTING OF VEHICLE AND TEST PARAMETERS

DETROIT

VEH	RUN	DATE	YR	MAKE	MODL	C	CID	V	T	A	FT	IRPM	P	DW	IGN	TESTS	INRT	RLHP	L	DB	WB	BAROM
001	D030	061374	74	BUIC	ELEC	8	455	4	1	1	26	0640	1	31	+12	1,3	5000	14.7	1	70	60	29.36
002	M101	070174	74	CHEV	MONT	8	400	2	1	1	26	0610	1	31	+12	1	4000	13.2	1	72	59	29.30
003	M060	062174	74	CHEV	IMPA	8	350	2	1	1	26	0680	1	29	+08	1,3	4500	14.0	1	77	70	29.01
004	M183	071374	74	DODG	DART	8	318	2	1	1	16	0580	1	29	+07	1	3500	12.3	1	70	64	29.40
005	M103	070174	74	FORD	TORI	8	302	2	1	2	22	0620	1	30	+10	1	4000	12.0	2	78	70	29.30
006	M106	070174	74	FORD	LTD	8	351	2	1	1	22	0480	1	36	+12	1	4500	14.0	1	78	70	29.27
007	M042	061774	74	OLDS	CUTL	8	350	4	1	1	22	0640	1	27	+10	1,3	4000	13.2	1	70	58	29.30
008	M046	061874	74	PLYM	SATE	8	318	2	1	1	19	0520	1	36	-02	1,3	4000	13.2	1	70	60	29.40
009	M056	061974	74	PONT	BONN	8	400	2	1	1	26	0680	1	30	+10	1,3	4500	14.0	1	74	60	29.30
010	M142	070874	74	VOLK	SEDA	4	097	1	4	2	11	1000	1	52	+10	1	2250	8.8	2	78	70	29.40
011	M095	062974	73	AMMO	HORN	6	258	1	1	1	16	0560	1	30	+00	1	3500	12.3	1	70	58	29.10
012	D019	061074	73	BUIC	LESA	8	350	2	1	2	26	0580	1	27	+06	1	4500	14.0	1	70	62	29.29
013	M048	061874	73	BUIC	LIMI	8	455	4	1	1	26	0680	1	30	+06	1	5000	14.7	1	78	66	29.29
014	M051	061974	73	CADI	DEVI	8	472	4	1	1	27	0700	1	28	+12	1	5500	15.3	1	75	67	29.34
015	M165	071074	73	CAPR	SEDA	4	122	2	4	2	12	1020	1	51	+14	1	2500	9.4	2	73	57	29.09
016	M099	070274	73	CHEV	STAW	4	140	2	1	2	11	0800	1	34	-08	1	2750	9.9	2	82	62	29.29
017	M167	071174	73	CHEV	CAMA	6	250	1	1	2	18	0650	1	31	+08	1	3500	11.[illegible]	2	70	58	29.30
018	M119	070474	73	CHEV	CHEV	8	307	2	1	1	22	0550	1	26	+12	1	3500	11.[illegible]	2	76	66	29.31
019	D021	061074	73	CHEV	MONT	8	350	2	1	1	22	0640	1	28	+10	1	4000	13.2	1	75	57	29.29
020	M044	061774	73	CHEV	CHEV	8	350	2	1	1	26	0670	1	26	+12	1,6	4000	12.0	2	82	64	29.26
021	D007	060674	73	CHEV	LAGU	8	350	2	1	2	22	0760	1	28	+08	1	4000	13.2	1	77	61	29.30
022	D003	060574	73	CHEV	MONT	8	350	4	1	1	22	0530	1	32	+10	1,6	4000	13.2	1	72	63	29.48
023	D020	061074	73	CHEV	CAPR	8	402	2	1	1	26	0680	1	29	+10	1,6	4500	14.0	1	77	62	29.27
024	M177	071274	73	CHRY	NEWY	8	440	4	1	1	23	0570	1	48	+07	1	4500	14.0	1	70	60	29.58
025	M178	071374	73	DATS	SEDA	6	146	2	1	1	14	0710	1	50	+10	1	2750	9.9	2	84	[illegible]	[illegible].47
026	M040	061574	73	DODG	DART	6	225	1	1	1	16	0780	1	36	+01	1	3000	10.3	2	78	66	29.28
027	M111	070274	73	DODG	DART	8	318	2	1	2	16	0600	1	38	+02	1	3500	11.6	1	81	73	29.41
028	M052	061974	73	FORD	PINT	4	122	2	4	2	11	0600	1	[illegible]	+00	1	2500	9.4	2	75	63	29.33
029	M162	071174	73	FORD	MAVE	6	200	1	1	2	15	0600	1	[illegible]	+14	1	3000	10.3	2	70	58	29.5[illegible]
030	M190	071574	73	FORD	MUST	8	302	2	1	2	16	0670	1	45	+06	1	3500	12.5	1	76	[illegible]	29.4[illegible]
031	M054	061974	73	FORD	LTD	8	351	2	1	2	22	0680	1	35	+10	1	4500	12.7	2	76	[illegible]	29.38
032	D015	060374	73	FORD	MUST	8	351	2	1	1	19	0530	1	30	+[illegible]	1,6	3500	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
033	D001	060474	73	FORD	STAW	8	400	2	1	1	21	0420	1	31	+[illegible]	1,6	5000	14.[illegible]	1	74	64	[illegible]
034	D004	060574	73	FORD	LTD	8	400	2	1	1	22	[illegible]	1	38	+10	1,6	4500	14.0	1	78	67	29.47
035	M093	062974	73	MAZD	SEDA	[illegible]	070	4	4	2	17	[illegible]	1	60	+[illegible]	1	[illegible]	9.[illegible]	2	74	60	29.41
036	D026	061274	73	MERC	MARQ	8	429	4	1	1	[illegible]	0640	1	24	+12	1,6	5000	14.[illegible]	1	74	[illegible]	29.33
037	M170	071274	73	OLDS	CUTL	8	350	4	1	1	22	0600	1	27	+10	1	4000	13.2	1	78	61	29.58
038	D008	060674	73	OLDS	98	8	455	4	1	1	26	0600	1	33	+[illegible]	1,6	5000	14.7	1	74	68	29.29
039	M169	071274	73	PLYM	FURY	8	318	2	1	1	23	0580	1	37	+14	1	4500	13.2	2	76	61	29.18
040	D016	060874	73	PLYM	FURY	8	360	2	1	1	23	0660	1	38	+10	1,6	4000	13.2	1	76	66	29.[illegible]
041	M113	070374	73	PONT	VENT	8	350	2	1	1	21	0620	1	24	+12	1	3500	12.3	1	74	[illegible]	29.32
042	D010	060774	73	PONT	GRNA	8	400	2	1	1	26	0610	1	27	+10	1,6	4500	14.0	1	72	64	29.21
043	M189	071474	73	TOYO	CELI	4	120	2	4	2	12	0700	1	50	+07	1	2500	9.4	2	77	66	29.30
044	M122	070474	73	VOLK	SEDA	4	097	1	4	2	11	1000	1	[illegible]	+10	1	2000	8.3	2	71	59	29.32
045	M154	071074	73	VOLK	SEDA	4	[illegible]	[illegible]	1	2	11	[illegible]	1	40	+[illegible]	1	2250	8.8	2	71	61	29.43
046	M091	061074	72	BUIC	LESA	8	350	2	1	1	26	[illegible]	1	[illegible]	+[illegible]	1,6	4500	14.0	1	[illegible]	65	29.30
047	M115	070374	72	BUIC	CENT	8	455	4	1	1	24	0600	1	[illegible]	+14	1	4500	14.[illegible]	1	81	72	29.30
048	M124	070374	72	CHEV	VEGA	4	140	2	4	2	11	0800	1	33	+00	1	2500	9.4	2	83	64	29.42
049	M072	062474	72	CHEV	NOVA	6	250	1	1	2	16	[illegible]	1	29	+08	1	3000	10.3	2	71	58	29.40
050	M135	071374	72	CHEV	MALI	8	307	2	1	2	19	[illegible]	1	31	+08	1	3500	11.[illegible]	2	80	74	29.40
051	M037	061474	72	CHEV	STAW	8	350	2	1	1	23	[illegible]	1	28	+08	1,6	5000	14.7	1	76	60	29.34
052	D006	060674	72	CHEV	IMPA	8	350	2	1	2	26	0600	1	40	+06	1,6	4500	14.0	1	75	61	29.34
053	M120	070474	72	CHEV	STAW	8	350	2	1	1	19	0600	1	31	+12	1	4000	13.2	1	74	56	29.31
054	D012	060774	72	CHEV	CAPR	8	400	2	1	1	26	0600	1	28	+10	1,6	4500	14.0	1	78	68	29.30
055	M147	070974	72	DATS	SEDA	4	097	[illegible]	1	2	11	0800	1	54	-06	1	2500	9.4	2	83	72	29.31
056	M123	070474	72	DODG	DART	8	318	2	1	1	16	[illegible]	1	[illegible]	+14	1	3500	10.3	2	76	64	29.49
057	D014	060874	72	DODG	POLA	8	360	2	1	1	23	0560	1	31	+08	1,6	4000	13.2	1	78	72	29.31
058	M104	070274	72	FORD	PINT	4	122	2	4	2	11	0800	1	40	+12	1	2500	9.4	2	75	70	29.28
059	M118	071474	72	FORD	TORI	8	302	2	1	1	22	[illegible]	1	[illegible]	+09	1	3500	11.2	2	78	68	29.30
060	M136	071074	72	FORD	LTD	8	351	2	1	2	22	[illegible]	1	36	+07	1	4500	12.7	2	73	64	29.51

APPENDIX A,CONT'D

LISTING OF VEHICLE AND TEST PARAMETERS

DETROIT

VEH	RUN	DATE	YR	MAKE	MODL	C	CID	V	T	A	FT	IRPM	P	DW	IGN	TESTS	INRT	RLHP	L	DB	WB	BAROM
061	M059	062074	72	FORD	GALA	8	351	2	1	1	22	0520	1	28	+04	1,3	4000	13.2	1	78	69	29.04
062	D011	060774	72	FORD	STAW	8	400	2	1	1	21	0600	1	29	+14	1,6	4500	14.0	1	72	66	29.22
063	M092	062874	72	FORD	THUN	8	429	4	1	1	23	0480	1	28	+04	1	4500	14.0	1	80	64	29.10
064	M075	062574	72	LINC	CONT	8	460	4	1	1	22	0640	1	25	-01	1	5500	15.3	1	72	59	29.45
065	D018	061074	72	MERC	MONT	8	400	2	1	2	22	0620	1	34	+04	1,6	4500	14.0	1	72	66	29.30
066	M063	062174	72	OLDS	CUTL	8	350	2	1	1	20	0560	1	30	+04	1,3	3500	12.3	1	75	63	29.15
067	D025	061174	72	OLDS	98	8	455	4	1	1	25	0620	1	32	+04	1,6	4500	14.0	1	80	59	29.36
068	M139	070874	72	OPEL	SEDA	4	116	2	1	2	11	0830	1	54	+10	1	2500	9.4	2	80	70	29.43
069	M108	070274	72	PLYM	VALI	6	225	1	1	1	16	0580	1	34	+05	1	3000	10.3	2	73	69	29.28
070	M105	070174	72	PLYM	FURY	8	318	2	1	1	23	0690	1	37	+03	1	4000	13.2	1	83	70	29.36
071	M110	070274	72	PONT	CATA	8	350	2	1	2	25	0700	1	31	+12	1	4500	14.0	1	80	72	29.40
072	M136	070674	72	PONT	BONN	8	455	2	1	1	25	0580	1	34	+06	1	4500	14.0	1	77	67	29.51
073	M085	062774	72	TOYO	CORO	4	097	2	4	2	12	0820	1	54	+05	1	2250	8.8	2	78	63	29.54
074	M098	062974	72	VOLK	SEDA	4	097	1	4	2	11	1040	1	44	+02	1	2250	8.8	2	83	62	29.26
075	M097	062974	72	VOLK	SEDA	4	097	1	1	2	11	1020	1	58	+10	1	2250	8.8	2	72	60	29.23
076	M039	061574	71	AMMO	STAW	8	304	2	1	1	17	0680	1	28	+03		4000	12.0	2	76	60	29.15
077	M116	070274	71	BUIC	LESA	8	350	2	1	1	24	0540	1	34	+06		4500	14.0	1	80	70	29.29
078	D028	061274	71	PUIC	ELEC	8	455	4	1	1	24	0630	1	29	+16	6	4500	14.0	1	78	58	29.37
079	M117	070474	71	CADI	DEVI	8	472	4	1	1	27	0900	1	27	+12		5000	14.7	1	78	68	29.30
080	M134	070674	71	CHEV	VEGA	4	140	1	3	2	11	1200	1	54	+10		2500	9.4	2	72	64	29.51
081	M114	070474	71	CHEV	MALI	8	307	2	1	2	19	0560	1	28	+12		3500	11.2	2	78	70	29.32
082	M151	070974	71	CHEV	MONT	8	350	4	1	1	19	0560	1	30	+04		4000	12.0	2	76	70	29.30
083	D009	060674	71	CHEV	STAW	8	350	2	1	1	23	0550	1	40	+12	3	5000	14.7	1	78	67	29.28
084	M143	070874	71	CHEV	MALI	8	350	4	1	2	19	0420	1	29	-02		3500	12.3	1	75	68	29.40
085	D065	062274	71	CHEV	IMPA	8	400	2	1	1	24	0660	1	27	+12	6	4000	13.2	1	72	[illegible]	29.42
086	M041	061174	71	CHRY	300	8	440	4	1	1	23	0630	1	37	+02		4500	14.0	1	75	60	29.29
087	M158	071074	71	DATS	SEDA	4	071	2	4	2	10	0920	1	58	+15		2000	8.3	2	70	58	29.42
088	M068	062474	71	DODG	CHAR	8	318	2	1	2	21	0680	1	32	+10	6	3500	12.3	1	70	61	29.62
089	M047	061874	71	FORD	PINT	4	122	2	4	2	11	0800	1	38	+03		2250	8.8	2	78	64	29.28
090	M034	061374	71	FORD	MAVE	6	200	1	1	2	15	0590	1	37	+09		2750	9.9	2	70	62	29.38
091	M082	062674	71	FORD	TORI	8	302	2	1	2	20	0630	1	29	+07	6	3500	11.2	2	70	60	29.55
092	M033	061474	71	FORD	LTD	8	351	2	1	1	23	0610	1	33	+03	3	4500	14.0	1	70	60	29.38
093	M180	071374	71	FORD	LTD	8	400	2	1	1	23	0620	1	26	+05		4000	13.2	1	81	69	29.45
094	M079	062674	71	MERC	MONT	8	400	2	1	1	22	0610	1	29	+24	6	4500	14.0	1	70	58	24.40
095	M128	070274	71	OLDS	CUTL	8	350	4	1	1	20	0570	1	29	+12		3500	12.3	1	73	62	29.50
096	D027	061074	71	OLDS	DELT	8	455	2	1	1	23	0660	1	28	+10	3	4500	14.0	1	70	57	29.33
097	M121	070474	71	PLYM	VALI	6	225	1	1	2	17	0480	1	40	+06		3000	10.3	2	70	58	29.31
098	D024	061174	71	PLYM	SATE	8	318	2	1	1	21	0720	1	30	+05	3	3500	12.3	1	74	59	29.33
099	M132	070674	71	PONT	FIRE	8	350	2	1	2	17	0560	1	31	+10		3500	12.3	1	78	66	29.51
100	D029	061374	71	PONT	GTO	8	400	4	1	1	20	0610	1	29	+12	6	4000	13.2	1	71	58	29.38
101	M149	070974	71	TOYO	CORO	4	097	2	1	1	12	0520	1	54	+06		2000	8.3	2	77	69	29.30
102	M131	070674	71	VOLK	SEDA	4	097	1	4	2	11	0920	1	48	+05		2250	8.8	2	79	65	29.52
103	M100	070174	70	BUIC	STAW	8	455	4	1	1	24	0600	1	29	+05		5000	14.7	1	72	61	29.29
104	M107	070274	70	CHEV	NOVA	6	250	1	1	2	18	0710	1	34	+04		3000	10.3	2	75	68	29.29
105	M182	071374	70	CHEV	NOVA	8	307	2	1	2	18	0600	1	32	+06		3500	11.2	2	80	69	29.40
106	M144	070874	70	CHEV	IMPA	8	350	2	1	2	25	0460	1	28	-06		4000	12.0	2	81	71	29.40
107	M043	061774	70	CHEV	MONT	8	350	2	1	2	18	0590	1	27	-03	6	4000	13.2	1	77	62	29.22
108	M083	062774	70	CHEV	IMPA	8	350	4	1	1	25	0540	1	19	+18	6	4000	13.2	1	70	58	29.53
109	M148	070974	70	CHEV	CAPR	8	400	2	1	1	25	0530	1	29	+05		4000	13.2	1	80	70	29.23
110	M102	070174	70	DODG	POLA	8	383	2	1	1	24	0570	1	34	+00		4000	13.2	1	70	58	29.30
111	M055	061974	70	FORD	MAVE	6	200	1	1	2	16	0600	1	32	+10		2750	9.9	2	82	65	29.35
112	M175	071274	70	FORD	FAIR	8	302	2	1	2	20	0600	1	31	+07		3500	11.2	2	70	59	29.57
113	M141	070874	70	FORD	GALA	8	351	2	1	2	24	0560	1	[illegible]	+05		4000	12.0	2	74	[illegible]	29.41
114	M032	061474	70	FORD	LTD	8	351	2	1	2	24	0560	1	29	+05	6	4000	13.2	1	72	62	29.41
115	M038	061574	70	FORD	LTD	8	390	2	1	2	23	0560	1	31	+09	6	4000	13.2	1	70	58	29.34
116	D031	061274	70	MERC	MARA	8	429	4	1	1	24	0480	1	32	+12	6	4500	14.0	1	74	60	29.43
117	M184	071374	70	OLDS	CUTL	8	350	2	1	1	20	0640	1	31	+12		3500	12.3	1	80	70	29.40
118	M078	062674	70	OLDS	98	8	455	4	1	1	25	0570	1	29	+08	6	4500	14.0	1	70	58	29.41
119	M179	071374	70	PLYM	SATE	8	318	2	1	2	19	0610	1	32	+02		3500	12.3	1	80	70	29.45
120	M050	061974	70	PLYM	FURY	8	318	2	1	1	19	0560	1	27	+05		4000	12.0	2	74	68	29.34

APPENDIX A,CONT'D

LISTING OF VEHICLE AND TEST PARAMETERS

DETROIT

VEH	RUN	DATE	YR	MAKE	MODL	C	CID	V	T	A	FT	IRPM	P	DW	IGN	TESTS	INRT	RLHP	L	DB	WB	BAROM
121	M145	070974	70	PONT	FIRE	8	350	2	1	2	19	0550	1	35	+07		3500	12.3	1	83	73	29.30
122	M164	071174	70	PONT	STAW	8	400	2	1	1	24	0690	1	37	+13		5000	14.7	1	73	57	29.59
123	M171	071274	70	TOYO	CORO	4	116	2	1	2	12	0785	1	46	+03		2500	9.4	2	73	60	29.58
124	M157	070974	70	VOLK	SEDA	4	097	1	4	2	11	0920	1	56	+00		2000	8.3	2	72	62	29.42
125	M174	071274	69	AMMO	AMBA	8	343	4	1	1	19	0650	1	30	+05		4000	13.2	1	70	60	29.57
126	M155	071074	69	BUIC	SPEC	8	350	2	1	2	20	0620	1	31	+01		3500	12.3	1	72	61	29.43
127	M156	071074	69	CHEV	BELA	6	250	1	1	2	25	0410	1	36	+03		4000	12.0	2	70	58	29.42
128	M163	071174	69	CHEV	CHEV	8	307	2	1	1	20	0530	1	26	+02		3500	11.2	2	74	58	29.57
129	M159	071074	69	CHEV	IMPA	8	327	2	1	1	25	0800	1	31	+15		4000	12.0	2	75	60	29.53
130	M088	062874	69	CHEV	MALI	8	350	2	1	2	20	0600	1	29	+06	6	3500	11.2	2	70	58	29.41
131	M084	062774	69	CHEV	STAW	8	350	4	1	1	22	0600	1	31	+12	6	4500	14.0	1	73	60	29.55
132	M176	071274	69	CHEV	CAPR	8	350	4	1	1	25	0600	1	30	+08		4000	13.2	1	73	63	29.59
133	M069	062474	69	CHRY	STAW	8	383	2	1	1	23	0580	1	30	+07	6	4500	14.0	1	70	60	29.60
134	M071	062474	69	DODG	DART	6	225	1	1	2	18	0460	1	43	+06		3000	10.3	2	76	60	29.41
135	M161	071174	69	FORD	FAIR	8	302	2	1	2	20	0505	1	25	+08		3500	11.2	2	78	58	29.54
136	M070	062474	69	FORD	FAIR	8	302	2	1	2	20	0550	1	26	+06	6	3500	11.2	2	73	57	29.41
137	M053	061974	69	FORD	MUST	8	351	2	1	2	20	0580	1	27	+06		3000	10.3	2	76	67	29.38
138	M076	062574	69	FORD	MUST	8	351	4	1	2	20	0540	1	26	+03	6	3500	12.3	1	77	62	29.46
139	D005	060574	69	FORD	GALA	8	390	2	1	1	24	0500	1	32	+09	3	4000	13.2	1	80	67	29.34
140	D013	060774	69	MERC	MONT	8	390	2	1	1	24	0670	1	29	+06	3	4500	14.0	1	77	68	29.36
141	M173	071274	69	OLDS	98	8	455	4	1	1	25	0560	1	33	+04		4500	14.0	1	75	63	29.57
142	M045	061874	69	PLYM	FURY	8	318	2	1	1	24	0400	1	28	+10	6	4000	12.0	2	70	62	29.41
143	M186	071374	69	PONT	TEMP	8	350	2	1	2	21	0590	1	34	+04		3500	12.3	1	81	72	29.28
144	D017	060874	69	PONT	CATA	8	400	2	1	1	26	0600	1	30	+09	3	4000	13.2	1	74	62	29.01
145	M077	062574	69	VOLK	SEDA	4	091	1	4	2	11	0920	1	56	+04		2000	8.3	2	80	63	29.45
146	M153	071074	68	AMMO	JAVL	6	232	1	1	2	19	0460	1	31	+02		3000	10.3	2	73	62	29.43
147	M057	062074	68	BUIC	ELEC	8	430	4	1	2	25	0560	1	30	+05	6	4500	14.0	1	74	64	29.31
148	M090	062874	68	CADI	DEVI	8	472	4	1	1	26	0580	1	27	+10		5000	14.7	1	80	61	29.38
149	M094	062974	68	CHEV	MALI	6	230	1	1	2	20	0740	1	32	+10		3500	11.2	2	70	58	29.11
150	M062	062174	68	CHEV	IMPA	8	307	2	1	2	25	0480	1	28	+02	6	4000	12.0	2	75	67	29.09
151	M073	062574	68	CHEV	IMPA	8	327	4	1	1	25	0460	1	35	+07	6	4000	12.0	2	72	62	29.41
152	M140	070874	68	CHEV	MALI	8	327	4	1	2	20	0530	1	30	-10		3500	11.2	2	81	70	29.40
153	M187	071374	68	CHEV	MALI	8	327	4	1	2	20	0560	1	31	+04		3500	12.3	1	81	71	29.29
154	M080	062674	68	DODG	POLA	8	383	2	1	2	24	0760	1	28	+08	6	4000	13.2	1	80	63	29.60
155	M127	070574	68	FORD	FAIR	6	200	1	1	2	20	0640	1	41	+15		3500	11.2	2	72	62	29.50
156	M086	062774	68	FORD	MUST	8	289	2	1	2	20	0490	1	30	+18		3000	10.3	2	82	62	29.53
157	M126	070574	68	FORD	GALA	8	302	2	1	2	24	0600	1	28	-09		4000	12.0	2	76	64	29.50
158	M035	061474	68	FORD	TORI	8	390	2	1	1	20	0710	1	26	+08	6	3500	12.3	1	73	63	29.08
159	M087	062874	68	MERC	COUG	8	302	2	1	2	17	0580	1	32	+10	6	3500	12.3	1	70	58	29.42
160	M096	062974	68	OLDS	CUTL	8	350	2	1	2	20	0650	1	28	+06		3500	12.3	1	72	59	29.22
161	M133	070674	68	PLYM	BELV	8	318	2	1	2	19	0540	1	27	+07		3500	11.2	2	76	65	29.51
162	M168	071174	68	PONT	BONN	8	400	4	1	2	20	0550	1	27	+18		4500	14.0	1	74	60	29.63
163	M091	062874	68	VOLK	SEDA	4	091	1	4	2	11	0880	1	64	-10		2000	8.3	2	80	60	29.35
164	M138	070874	67	AMMO	AMBA	6	232	1	1	1	19	0540	1	28	+06		3500	11.2	2	82	70	29.43
165	M058	062074	67	BUIC	LESA	8	340	4	1	1	25	0480	1	35	-01	6	4000	12.0	2	76	67	29.05
166	M074	062574	67	CADI	DEVI	8	429	4	1	1	24	0500	1	27	+10	5	5000	14.7	1	70	58	29.40
167	M152	071074	67	CHEV	CAMA	6	250	1	1	2	18	0460	1	33	+06		4000	10.3	2	74	62	29.37
168	M104	070174	67	CHEV	IMPA	8	283	2	1	2	17	0510	1	29	+07		4000	12.0	2	77	67	29.33
169	M089	062874	67	CHEV	IMPA	8	283	2	1	2	24	0670	1	27	+05	6	4000	12.0	2	73	62	29.38
170	M036	061374	67	CHEV	STAW	8	327	4	1	1	22	0460	1	30	-09	6	4000	13.2	1	80	64	29.02
171	M066	062274	67	CHRY	NEWP	8	383	2	1	1	24	0860	1	36	+08	6	4000	13.2	1	72	57	29.42
172	M166	071174	67	DODG	MONA	8	383	2	1	2	25	0430	1	30	+03		4000	12.0	2	70	58	29.60
173	M064	062274	67	FORD	GALA	8	289	2	1	2	25	0630	1	25	+06		4000	12.0	2	74	60	29.40
174	M061	062174	67	FORD	GALA	8	289	2	1	2	25	0540	1	27	+05	6	4000	12.0	2	78	65	29.04
175	M137	070874	67	FORD	GALA	8	390	2	1	1	25	0580	1	24	+11		4000	13.2	1	82	72	29.43
176	M067	062274	67	MERC	MONT	8	390	2	1	2	24	0620	1	33	+04		4000	13.2	1	73	57	29.43
177	M172	071274	67	OLDS	CUTL	8	330	2	1	2	20	0640	1	33	+09		3500	12.3	1	73	61	29.57
178	M150	070974	67	PLYM	BARR	6	225	1	1	2	18	0540	1	35	+00		3000	10.3	2	75	68	29.30
179	M188	071474	67	PONT	VENT	8	400	2	1	2	26	0740	1	28	+04		4000	12.0	2	78	70	29.31
180	M081	062674	67	VOLK	SEDA	4	091	1	4	2	11	1020	1	46	+16		2000	8.3	2	78	62	29.57

Appendix B - Listing of Test Vehicle Use and Maintenance Data

Legend

VEH - Vehicle Number

YR - Model Year

MAKE - Vehicle Make

MODL - Vehicle Model

VIN - Vehicle Identification Number

ODOM - Odometer Reading

PDATE - Purchase Date of Vehicle (month, year or 9999: don't know)

N - New or Used (1: new, 2: used)

VMT1 - Vehicle Miles Traveled During the Past Year

VMT2 - Vehicle Miles Traveled During the Year Before Last

%C - Percent City Driving

%S - Percent Suburban Driving

%F - Percent Freeway Driving

LOC - Date of Last Oil Change (month, year or 9999: don't know)

%W - Percent Driving to and from Work

%G - Percent Shopping

%T - Percent Transporting Family Members

%V - Percent Vacation Driving

%B - Percent Business Driving (not to and from work)

LTU - Last Tune Up (month, year)

W - Who performed tune up?
1: franchised dealer
2: independent garage
3: service station
4: owner or friend
9: don't know

APPENDIX B

LISTING OF TEST VEHICLE USE AND MAINTENANCE DATA

DENVER

```
VEH  YR MAKE MODL        VIN        ODOM  PDATE N   VMT1  VMT2  %C %S %F   LOC  %W %G %T %V %B   LTU W
-----------------------------------------------------------------------------------------------------

001  74 BUIC RIVI  4Y87W4H416271 008069  1073 1  08066 00000  75 15 10  0174  00 25 25 25 25  0374 1
002  74 CHEV CAPR  1N39R4C115559 003683  1073 1  03700 00000  85 15 00  0274  50 40 00 10 00  9999 9
003  74 CHEV NOVA  1Y17K4L115858 005384  1073 1  05000 00000  90 05 05  0474  45 25 20 10 00  1073 1
004  74 DODG DART  LH41G4R207471 001560  9999 1  00000 00000  00 00 00  9999  00 00 00 00 00  9999 9

005  74 FORD MAVE  4K92F105967   005885  1073 1  08400 00000  90 10 00  0474  80 08 08 04 00  9999 9
006  74 FORD TORI  4B32H121496   007403  1173 1  07400 00000  80 10 10  9999  20 10 10 00 60  9999 9
007  74 OLDS CUTL  3G37K4R124043 003906  1173 1  04000 00000  80 10 10  9999  50 10 30 10 00  9999 9
008  74 PLYM SCAM  VH23G4117127  004543  1073 1  04500 00000  85 02 13  9999  75 05 15 00 05  9999 9

009  74 PONT CATA  2L57R4C102286 005771  1173 1  05771 12000  50 25 25  0574  80 05 00 15 00  9999 9
010  74 VOLK SEDA  1142038516    006336  1073 1  06000 00000  00 00 00  0474  75 10 05 10 00  0474 1
011  73 AMMO GREM  A3A465E318270 011419  0473 1  11000 00000  97 01 02  0474  50 35 10 05 00  0474 1
012  73 BUIC CENT  4D29J3Z126667 011077  0373 1  09000 00000  60 10 30  0174  60 05 00 15 20  0174 1

013  73 BUIC RIVI  4Y87U3H457486 028422  9999 1  26000 00000  90 05 05  0174  90 05 05 00 00  0374 1
014  73 CADI FLEE  6B69R3Q174292 018382  9999 1  00000 00000  00 00 00  9999  00 00 00 00 00  9999 9
015  73 CAPR SEDA  GAECMP74999   004863  1173 1  00000 12000  95 00 05  9999  00 00 05 05 90  9999 9
016  73 CHEV VEGA  1V77A3U123976 013363  1072 1  10000 13000  95 05 00  0574  00 90 10 00 00  0574 1

017  73 CHEV NOVA  1X27D3614373  017395  1272 1  04000 10000  60 20 20  9999  80 10 10 00 00  9999 9
018  73 CHEV NOVA  1X17F3L166524 014486  0773 1  11600 13000  60 10 30  9999  50 25 [illegible]  9999 9
019  73 CHEV NOVA  1X17F3L130768 023929  1172 1  17000 17000  45 45 10  [illegible]  88 02 00 00 10  0574 1
020  73 CHEV MALI  1D29H3K557970 010900  0773 1  10000 00000  85 10 05  9999  00 75 15 00 10  9999 9

021  73 CHEV MALI  1D37H3K414552 013157  1072 1  09000 14000  75 [illegible]  0474  60 30 00 00 10  0474 1
022  73 CHEV MONT  1H57K3K590855 006892  1073 1  06055 00000  45 55 00  9999  10 20 00 70 00  9999 1
023  73 CHEV CAPR  1N47R3S116770 013089  1072 1  06000 01500  65 30 05  0574  70 10 10 10 00  9999 9
024  73 CHRY NEWP  CL43M3C236501 016277  0373 1  18500 00000  15 60 25  9999  00 20 15 50 15  9999 9

025  73 DATS 1200  LB110984331   000933  0373 1  03900 00000  95 05 00  9999  00 95 00 00 05  9999 1
026  73 DODG DART  LL41C3R362347 005741  0773 1  08741 10000  40 10 50  0674  00 30 [illegible] 10  9999 9
027  73 DODG CHAR  WH23G3A226814 004116  1273 1  00000 00000  70 10 20  0474  70 10 10 10 00  9999 9
028  73 FORD PINT  F3R11X206922F 003776  0773 1  03508 00000  80 10 10  1173  00 10 65 25 00  1173 1

029  73 FORD MAVE  3K91L245499   006197  [illegible] 1  08000 00000  75 15 10  9999  60 15 10 00 15  9999 9
030  73 FORD MAVE  3K92F142510   011665  1272 1  07000 00000  75 25 00  0574  00 50 25 25 00  0574 1
031  73 FORD TORI  F3A27H27V755F 004996  0574 1  04990 00000  10 90 00  0574  50 00 00 00 50  9999 9
032  73 FORD TORI  F3H30H172016F 026397  0674 2  25000 25000  60 20 20  0674  00 05 05 10 80  0674 1

033  73 FORD STAW  3P[illegible]4515511 017971  9999 1  00000 00000  00 00 00  9999  00 00 00 00 00  9999 9
034  73 FORD LTD   F3P63S133628F 012365  9999 1  00000 00000  00 00 00  9999  00 00 75 00 25  9999 9
035  73 MAZD RX2   S122A145801   023499  1272 1  06000 18000  50 30 20  9999  10 20 20 50 00  9999 1
036  73 MERC BROU  F3H11N537745F 011654  0173 1  11000 00000  75 05 20  1173  94 02 00 02 02  1174 4

037  73 OLDS CUTL  3J57M3M351133 015040  0473 1  12000 12000  85 10 05  0574  15 03 75 02 05  0174 2
038  73 OLDS CUTL  3J57U3R149461 019975  1172 1  13000 13000  70 29 01  0674  80 08 02 10 00  0674 1
039  73 PLYM VALI  VL41G3R226145 011350  0173 1  14000 07000  50 25 25  0674  50 20 25 05 00  0674 1
040  73 PLYM FURY  PH43K3D277116 019504  9999 1  00000 00000  00 00 00  9999  00 00 00 00 00  9999 9

041  73 PONT LEMA  2D29M3Z117646 [illegible]  [illegible] 1  [illegible] 10000  00 00 20  9999  10 20 10 30 30  9999 9
042  73 PONT CATA  2L49R3C119493 [illegible]  [illegible] 1  [illegible] 21000  [illegible] 10  9999  00 10 60 30 00  9999 1
043  73 TOYO CORO  RT89[illegible] 013182  [illegible] 2  14000 12000  50 10 40  1273  50 25 00 25 00  1273 1
044  73 VOLK SEDA  1332146613    [illegible]  [illegible] 1  [illegible]  25 25 [illegible]  0574  70 15 05 10 00  0574 1

045  73 VOLK STAW  [illegible]   [illegible]  [illegible] 1  [illegible]  00 00 [illegible]  9999  [illegible] 00 00 00 00  9999 9
046  72 BUIC SKYL  4D[illegible]  [illegible]  [illegible] 1  [illegible]  [illegible]  9999  [illegible]  9999 9
047  72 BUIC CENT  4P19V[illegible] [illegible]  [illegible] 1  12000 12000  75 15 10  0274  05 65 10 20 00  9999 9
048  72 CHEV VEGA  1V77B[illegible] [illegible]  [illegible] 1  12000 14000  40 10 50  9999  50 10 07 03 30  9999 4

049  72 CHEV NOVA  1X27D2L163093 [illegible]  [illegible] 1  [illegible] 14000  75 15 10  0174  50 05 25 20 [illegible]  1073 4
050  72 CHEV NOVA  1X27F2L130[illegible] [illegible]  [illegible] 1  [illegible] 12000  40 20 40  1273  00 50 50 00 00  1073 4
051  72 CHEV IMPA  1M69H2C207243 [illegible]  [illegible] 1  [illegible] 20000  25 25 50  0474  96 00 00 04 00  0474 2
052  72 CHEV NOVA  1X27H2L147364 [illegible]  [illegible]  [illegible]  10 10 80  0474  95 00 00 05 00  0174 2

053  72 CHEV IMPA  1M39H2J[illegible] [illegible]  [illegible]  [illegible]  90 05 05  9999  00 90 00 10 00  9999 9
054  72 CHEV STAW  1L45R2C[illegible] [illegible]  [illegible]  [illegible]  60 05 35  0174  60 20 10 10 00  1073 1
055  72 DATS SEDA  PL[illegible]   [illegible]  [illegible]  [illegible]  80 10 10  0274  30 15 15 15 25  0274 2
056  72 DODG DART  LH23G2B[illegible] 015963  [illegible]  [illegible]  [illegible]  0174  60 10 02 18 10  0374 1

057  72 DODG POLA  DM43K2D[illegible] 020923  [illegible]  [illegible] 34000  75 10 15  1273  08 00 00 00 92  0773 1
058  72 FORD PINT  F2R15X115765F 014907  [illegible] 1  [illegible] 27000  00 00 00  0474  00 00 00 00 00  1173 1
059  72 FORD MAVE  2K92F112[illegible] 030630  [illegible] 1  [illegible] 18000  45 15 40  0374  15 05 05 02 73  1173 4
060  72 FORD TORI  2A30H117[illegible] 021313  [illegible] 1  [illegible] 25000  85 05 10  1173  90 05 00 05 00  0174 1
```

APPENDIX B,CONT'D

LISTING OF TEST VEHICLE USE AND MAINTENANCE DATA

DENVER

VEH	YR	MAKE	MODL	VIN	ODOM	PDATE	N	VMT1	VMT2	%C	%S	%F	LOC	%W	%G	%T	%V	%B	LTU	W
061	72	FORD	STAW	F2P70H149448F	010856	0472	1	05000	05000	85	00	15	0374	00	50	35	15	00	0374	2
062	72	FORD	LTD	F2P64S154969F	030662	0572	1	17000	13000	60	10	30	0474	90	05	00	05	00	1273	1
063	72	FORD	THUN	2J87N159669	027381	0472	1	10000	10000	85	10	05	0574	75	15	10	00	00	0574	1
064	72	LINC	CONT	F2Y89A871080F	065573	9999	2	00000	00000	00	00	00	9999	00	00	00	00	00	9999	9
065	72	MERC	MONT	F27725612444F	019387	0273	2	08000	00000	20	20	60	0274	10	20	10	60	00	0474	2
066	72	OLDS	CUTL	3J39K2M100469	017372	0172	1	07500	07500	80	10	10	0474	00	40	50	10	00	0474	1
067	72	OLDS	DELT	3N57T2X132422	024391	9972	1	05000	10000	50	30	20	0474	50	10	20	10	10	0873	1
068	72	OPEL	1900	549757200	016824	1072	1	12000	00000	40	10	50	0374	10	00	10	10	70	0773	1
069	72	PLYM	DUST	VL29B2177157	028169	0372	1	13000	13000	85	05	10	0174	75	10	05	10	00	0374	1
070	72	PLYM	SATE	RH41G26217811	022399	0872	1	12000	10000	15	30	55	9999	20	05	05	30	40	9999	4
071	72	PONT	LEMA	2D37M2A149729	023824	9972	1	11000	11000	99	01	00	0474	99	01	00	00	00	9999	1
072	72	PONT	BONN	2N69U2C306273	043485	1172	1	10000	00000	50	20	30	0474	00	10	10	70	10	0474	3
073	72	TOYO	CORO	TE21620617	019219	1272	1	18000	00000	85	05	10	9999	90	01	04	02	03	9999	2
074	72	VOLK	SEDA	1122501002	021837	0573	2	15000	00000	40	20	40	0574	60	20	05	15	00	0474	2
075	72	VOLK	SEDA	1122586396	021573	9999	1	00000	00000	00	00	00	9999	00	00	00	00	00	9999	9
076	71	AMMO	STAW	A1A187H271168	038253	0671	1	10000	10000	25	25	50	0574	45	15	15	15	10	1073	1
077	71	BUIC	SKYL	433271Z129905	025654	0771	1	06000	03000	75	20	05	0174	00	10	10	80	00	0174	2
078	71	BUIC	ELEC	484391H418690	043873	1272	2	20000	00000	75	15	10	0873	02	02	05	11	80	0473	1
079	71	CADI	DEVI	683471Q135462	020990	0471	1	06000	06000	98	02	00	9999	10	00	00	00	90	9973	1
080	71	CHEV	VEGA	141771U325655	004933	9971	1	01700	00000	75	25	00	1273	00	50	50	00	00	1273	1
081	71	CHEV	MALI	136371L107945	046628	0571	1	11000	13000	85	05	10	0574	70	20	05	05	00	0574	2
082	71	CHEV	NOVA	114691W340120	016904	0971	1	00000	00000	90	05	05	0374	90	03	00	07	00	0473	3
083	71	CHEV	MALI	136371K157116	025415	0271	1	07500	10000	80	10	10	0474	65	10	00	00	25	0374	3
084	71	CHEV	IMPA	164471C135403	030775	1071	2	06000	06000	99	00	01	0374	95	00	00	05	00	9999	9
085	71	CHEV	IMPA	164691S259009	027284	0971	1	10000	10000	50	25	25	9999	50	20	20	10	00	9973	3
086	71	CHRY	300	CS23T1C254367	026786	9971	1	10000	10000	90	10	00	0274	10	40	30	10	10	0274	1
087	71	DATS	SEDA	LB110733400	042105	0672	2	17500	10000	30	35	35	0973	60	10	05	25	00	0474	2
088	71	DODG	VAN	B23AE1U152370	045621	0670		18000	12000	70	05	25	0474	01	25	23	50	01	0174	2
089	71	FORD	PINT	F1X10X208965F	047298	0371	1	12000	12000	20	05	75	1173	75	15	05	05	00	0474	2
090	71	FORD	MAVE	F1K91T182298F	034558	0771	2	10000	10000	80	10	10	0474	30	30	10	10	20	0973	2
091	71	FORD	STAW	F1A40F141984F	014676	9971	1	04000	10000	50	50	25	0374	10	50	10	10	20	0474	1
092	71	FORD	MUST	F1F05H109358F	053694	0572	2	18000	07000	20	60	20	0174	80	10	05	00	05	0474	4
093	71	FORD	THUN	F1Y83N110404F	044332	1071	1	12000	17000	50	25	25	0374	00	20	45	35	00	1073	4
094	71	MERC	MONT	1Z445519455	032967	0871	1	12000	12000	60	35	05	0171	70	05	00	10	15	1173	3
095	71	OLDS	CUTL	336871M116602	039250	0271	1	10000	15000	40	35	05	1073	50	20	10	10	10	0374	4
096	71	OLDS	DELT	364391X103411	019642	1270	1	10000	10000	95	05	00	9999	00	80	20	00	00	9999	4
097	71	PLYM	SCAM	VH23C1R182833	021559	0171	1	02400	03000	90	05	05	9974	00	90	00	05	05	0174	2
098	71	PLYM	SATE	RH41G1G232410	029820	0472	2	12000	08000	70	20	10	0174	60	20	10	10	00	0374	4
099	71	PONT	FIRE	226871N122227	048628	0471	1	15000	18000	60	30	10	2174	40	20	10	30	00	9999	4
100	71	PONT	CATA	252691X344593	022075	1071	1	07500	07500	75	10	15	0574	00	10	00	90	00	0274	3
101	71	TOYO	CORO	TE21009825	044783	0872	2	06500	13000	80	15	05	0374	70	02	00	25	03	0374	4
102	71	VOLK	SEDA	1112443667	033100	9971	1	12000	15000	65	10	25	2174	50	35	05	10	00	0374	4
103	70	BUIC	STAW	460460C107385	041971	1269	1	11000	10000	90	05	05	0174	40	30	10	05	15	1173	2
104	70	CHEV	STAW	131360L132321	074738	0772	2	11000	11000	90	03	07	0373	00	35	55	10	00	1173	2
105	70	CHEV	NOVA	114270W138429	059334	0969	1	12000	12500	40	10	50	0574	75	20	05	00	00	0574	4
106	70	CHEV	IMPA	164390S181190	013513	9970	1	00500	00500	90	05	05	9999	00	70	15	15	00	9973	3
107	70	CHEV	IMPA	164690T134600	045888	0173	2	12000	00000	70	05	25	9999	10	00	10	25	55	9973	1
108	70	CHEV	MALI	135370L144504	028250	0770	2	05000	05000	75	10	15	0174	65	10	15	10	00	0174	3
109	70	CHEV	IMPA	164470S148767	053077	0370	2	13000	15000	80	10	10	9999	00	10	80	05	05	0274	3
110	70	DODG	POLA	DM43L0D176351	062455	1071	2	15000	17000	40	40	20	0174	01	99	00	00	00	1173	9
111	70	FORD	MAVE	FOK91T216267	053429	1270	1	13000	15000	40	40	20	0474	05	60	15	20	00	0374	2
112	70	FORD	MUST	0F01F124764	024439	9972	2	04500	03000	80	10	10	1273	00	10	00	90	00	0274	4
113	70	FORD	TORI	FOR32H123775F	057651	1269	1	16000	14000	50	40	10	1273	00	25	00	75	00	1273	1
114	70	FORD	CUST	FOU51H157090F	055788	0470	1	15000	10000	90	08	02	0174	50	45	01	03	01	0370	2
115	70	FORD	LTD	FOP64Y106149F	024009	1169	1	07500	07500	80	10	10	0973	05	35	00	10	45	0973	2
116	70	MERC	MARQ	0Z63N626555	038287	1070	1	03000	15000	75	15	10	0374	00	10	80	10	00	0374	9
117	70	OLDS	CUTL	336690Z129727	054967	0770	1	05000	22000	50	50	00	0374	00	25	25	50	00	0274	1
118	70	OLDS	TORO	394870M612213	044983	1269	1	10000	12000	70	05	25	0174	00	10	00	10	80	0174	4
119	70	PLYM	FURY	PM41G0D111946	029250	1170	1	06500	07000	85	10	05	1073	35	65	00	00	00	1073	2
120	70	PLYM	FURY	PH43G0D194163	073576	0271	2	15000	20000	00	00	00	0574	00	00	00	00	00	0673	1

APPENDIX B,CONT'D

LISTING OF TEST VEHICLE USE AND MAINTENANCE DATA

DENVER

VEH	YR	MAKE	MODL	VIN	ODOM	PDATE	N	VMT1	VMT2	%C	%S	%F	LOC	%W	%G	%T	%V	%B	LTU	W
121	70	PONT	LEMA	237370Z126568	056312	0470	1	10000	00000	50	10	40	0474	50	05	40	05	00	0474	2
122	70	PONT	STAW	252360X158165	029664	1070	1	05000	05000	50	30	20	0574	40	20	20	10	10	1273	2
123	70	TOYO	CORO	RT43183800	046658	0270	1	10000	10000	80	10	10	9999	85	05	05	05	00	9999	2
124	70	VOLK	SEDA	1102670792	037676	0471	2	07000	15000	50	25	25	0474	00	10	10	20	60	1073	2
125	69	AMMO	STAW	A9A085M18091	083867	9971	2	01200	01000	90	05	05	1273	90	01	06	01	02	1073	1
126	69	BUIC	LESA	452379X126409	090490	1268	1	18000	15000	70	20	10	9999	10	30	20	20	20	9999	4
127	69	CHEV	C10	CS149Z900764	03 487	0873	2	05000	00000	80	10	10	9999	60	10	15	05	10	9999	9
128	69	CHEV	MALI	136379K475687	058114	0669	1	12000	12000	90	05	05	9999	50	20	25	00	05	9999	9
129	69	CHEV	STAW	156469J273794	061479	0673	2	12000	00000	80	10	10	0374	60	10	20	10	00	0174	4
130	69	CHEV	IMPA	164399L039444	069793	9969	1	15000	15000	10	65	25	0274	60	15	10	10	05	0274	3
131	69	CHEV	CAMA	124379N555014	046423	1268	1	10000	10000	50	00	50	0474	75	05	00	00	20	0373	1
132	69	CHEV	STAW	166469S139505	045380	0970	1	08000	12000	20	05	75	0374	01	14	15	60	10	0174	1
133	69	CHRY	NEWP	CE27G9C272956	041455	0170	1	10000	10000	80	05	15	0474	02	10	73	15	00	1173	2
134	69	DODG	DART	LH41B9B234059	035001	0569	1	06000	06000	85	05	10	1173	75	15	00	10	00	0574	1
135	69	FORD	FAIR	9K33F117573	046802	9969	2	10000	10000	80	10	10	0473	10	00	15	00	75	0473	2
136	69	FORD	MUST	9F01F211609	058567	9969	1	09000	00000	20	00	80	0774	80	10	00	10	00	0674	4
137	69	FORD	TORI	9R35H186078	040805	1069	1	06000	07000	50	30	20	0574	45	05	20	20	10	1173	2
138	69	FORD	TORI	9K41H101148	056210	1068	1	12000	10000	50	10	40	0374	00	40	15	30	15	0174	4
139	69	FORD	GALA	9P51Y131635	076595	1268	1	10000	12000	50	25	25	0274	40	10	30	10	10	0274	2
140	69	MERC	MONT	9Z44X604194	028727	0869	1	08000	10000	85	13	02	0374	00	75	25	00	00	0374	2
141	69	OLDS	98	386399M158213	054917	1070	2	02000	15000	25	25	50	1273	00	10	20	70	00	1073	2
142	69	PLYM	FURY	PM43F9D259507	080762	0571	2	02500	24000	50	30	20	0374	00	03	00	02	95	0174	3
143	69	PONT	FIRE	223379N107982	048644	9969	1	09000	10000	35	05	60	0474	90	02	05	01	02	0474	3
144	69	PONT	GTO	242679R120750	068514	0269	1	10000	10000	25	20	55	0374	90	00	00	10	00	0174	4
145	69	VOLK	SEDA	1591047486	018407	9969	1	09000	09000	95	00	05	0174	00	50	50	00	00	0174	2
146	68	AMMO	JAVE	A85795B331931	043696	0768	1	10000	00000	60	20	20	0474	60	30	00	10	00	0474	2
147	68	BUIC	RIVE	494878H942508	066127	9968	2	10000	10000	60	20	20	9999	40	10	10	20	20	1272	2
148	68	CADI	DEVI	J8320900	052674	0670	2	10000	10000	85	10	05	0274	10	05	00	05	80	9999	1
149	68	CHEV	STAW	131358K114226	060548	9970	2	00000	00000	40	20	40	0374	00	30	60	10	00	9972	2
150	68	CHEV	STAW	154358J248261	061304	0768	1	10000	10000	50	50	00	0174	20	10	20	50	00	0673	4
151	68	CHEV	CAMA	124678N436630	056659	0668	1	08000	09000	40	40	20	0574	00	85	00	05	10	0274	2
152	68	CHEV	IMPA	166478T221976	065913	1072	2	10000	20000	10	70	20	0274	50	10	25	10	05	1273	2
153	68	CHEV	MALI	138678K170658	053641	0472	2	06500	06500	75	15	10	0574	25	25	00	25	25	0574	2
154	68	DODG	POLA	DL23G8D231671	045478	0668	1	02000	03000	50	25	25	0574	00	50	00	50	00	9999	1
155	68	FORD	MUST	8FD1T198791	061743	9970	2	13000	15000	60	10	30	0274	50	10	00	30	10	0274	4
156	68	FORD	MUST	8F01C101993	089540	1067	1	12000	20000	[illegible]	15	[illegible]	0374	65	10	10	10	05	1173	3
157	68	FORD	MUST	8R02J124750	093564	0168	1	10000	12000	60	[illegible]	10	[illegible]	80	20	00	00	00	1073	4
158	68	FORD	STAW	8P73Y171231	063508	1068	1	08000	16000	80	10	10	0274	50	15	15	15	05	0274	4
159	68	MERC	COUG	8F91F501511	056906	0672	2	10000	08000	75	15	10	0474	00	50	00	50	00	0973	1
160	68	OLDS	CUTL	336878Z118463	043600	0568	1	06000	02000	40	30	30	1273	05	50	00	45	00	1173	2
161	68	PLYM	SATE	RH41F8A272076	043886	1173	[illegible]	[illegible]	[illegible]	75	15	20	0174	75	00	00	00	00	0174	2
162	68	PONT	GTO	242378R1083	106917	0373	2	[illegible]	[illegible]	45	15	40	0574	50	15	02	33	00	0574	4
163	68	VOLK	SEDA	118678743	065768	0668	1	02000	04000	75	20	05	1273	40	60	00	00	00	1273	2
164	67	AMMO	RAMB	A7KA55E129612	044636	9968	1	10000	[illegible]	75	10	15	9999	00	45	45	05	05	9973	4
165	67	BUIC	SPEC	435697?114532	048161	1367	1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9999	00	05	05	90	00	1273	2
166	67	CADI	FLEE	P71H43496	091935	1073	2	07000	10000	40	[illegible]	70	1273	00	10	20	00	70	1073	2
167	67	CHEV	IMPA	163877L174510	054962	1167	1	27500	27500	[illegible]	[illegible]	[illegible]	0474	50	05	05	05	35	1273	2
168	67	CHEV	IMPA	164877F238310	100325	9999	2	25000	25000	55	40	15	9999	70	10	10	00	10	0374	2
169	67	CHEV	MALI	136177K106033	073181	1372	2	10000	10000	60	10	10	0474	10	50	20	20	00	1273	4
170	67	CHEV	IMPA	164397S119190	039635	9967	1	24000	05000	85	10	05	0274	00	20	10	25	45	9972	3
171	67	CHRY	NEWP	CE43G73252410	068744	0967	1	07000	08000	90	05	05	9999	75	10	05	10	00	9999	2
172	67	DODG	CORO	WH23F77153495	048105	0668	[illegible]	10000	10000	75	10	15	0574	50	25	00	25	00	1173	2
173	67	FORD	CUST	7652C155978	089560	0667	1	12000	14000	50	20	30	0474	75	10	00	15	00	0474	4
174	67	FORD	MUST	7F01C141392	072562	0367	2	10000	10000	50	25	25	9999	00	50	00	50	00	0572	2
175	67	FORD	GALA	7457H163356	071034	0773	2	09000	20000	40	40	20	9999	80	15	05	00	00	0773	2
176	67	MERC	MONT	7245H519225	061797	0573	2	05000	20000	65	10	25	0174	50	25	25	00	00	0474	2
177	67	OLDS	DELM	356697X125571	086121	1072	2	03000	03000	40	20	40	1273	60	10	10	10	10	9999	9
178	67	PLYM	VALI	VL21B72327554	066765	9972	2	00000	00000	40	50	10	9999	00	30	60	10	00	9990	4
179	67	PONT	TEMP	235177P214531	040790	9967	1	03000	03000	50	50	00	1173	00	50	00	50	00	9999	3
180	67	VOLK	SEDA	117659410	069769	1271	2	13000	14000	30	20	50	0574	25	15	10	00	50	0574	4

APPENDIX B

LISTING OF TEST VEHICLE USE AND MAINTENANCE DATA

HOUSTON

VEH	YR	MAKE	MODL	VIN	ODOM	PDATE	N	VMT1	VMT2	%C	%S	%F	LOC	%W	%G	%T	%V	%B	LTU	W
001	74	BUIC	LESA	4P69T4X124872	006535	1173	1	00000	00000	30	30	40	9999	10	05	05	00	80	9999	9
002	74	CHEV	NOVA	1X27H4L102530	017899	1173	1	17500	00000	50	30	20	0274	00	01	01	01	97	9999	9
003	74	CHEV	MALI	1D37H4K465892	001963	1273	1	00000	00000	80	10	10	9999	10	00	05	00	85	9999	9
004	74	DODG	CHAR	WH23G4121898	001364	9999	1	00000	00000	00	00	00	9999	00	00	00	00	00	9999	9
005	74	FORD	TORI	4B27F161375	001352	0274	1	01000	00000	99	00	00	9999	10	00	00	00	90	9999	9
006	74	FORD	CUST	F4W53H136457	007793	1273	1	07000	45000	30	30	40	9999	00	00	00	10	90	1273	9
007	74	OLDS	DELT	3N57K4M210607	002339	0274	1	00000	00000	50	00	50	9999	50	10	10	25	05	9999	9
008	74	PLYM	DUST	VL29G4113207	001738	1074	1	01715	00000	75	05	20	9999	20	10	05	05	60	9999	9
009	74	PONT.	CATA	2L69R4X104813	010661	1073	1	10000	00000	50	00	50	9999	05	00	00	00	95	9999	1
010	74	VOLK	SEDA	1142086180	003143	1173	1	00300	00000	75	05	20	9999	50	10	10	10	10	9999	9
011	73	AMMO	GREM	A3A465A136778	012709	1072	1	09000	03000	99	00	01	0174	50	30	00	20	00	9999	1
012	73	BUIC	STAW	4F45H32131789	031408	0573	1	31408	00000	50	40	10	0274	00	05	10	10	75	0274	2
013	73	BUIC	ELEC	4Z39T3H465332	011017	0173	1	10500	00000	50	20	30	1173	05	25	50	20	00	9999	9
014	73	CADI	DEVI	6D49R3Q249584	013017	0373	1	10000	16000	80	10	10	9999	00	05	00	00	95	9999	9
015	73	CAPR	CAPP	GAECNJ24788	016706	0473	1	15000	00000	30	40	30	0374	60	10	00	30	00	0174	2
016	73	CHEV	VEGA	1V15B3U381545	010024	0573	1	06000	00000	90	00	10	0174	90	10	00	00	00	0174	3
017	73	CHEV	VEGA	1V77B3443970	006971	0773	1	07000	00000	20	60	20	9999	50	34	10	06	00	9999	9
018	73	CHEV	CHEL	1C29F3R4A9441	035802	0174	1	34000	00000	70	20	10	0274	00	00	00	00	00	0274	2
019	73	CHEV	NOVA	Y27F3L211406	010077	0773	2	10080	00000	80	10	10	0873	01	04	90	05	00	0873	4
020	73	CHEV	MONT	1H57H3R479338	005782	0573	1	06000	00000	80	10	10	1273	[illegible]	60	10	20	10	9999	9
021	73	CHEV	CAMA	1587H3N133291	006503	0573	1	06500	00000	15	75	10	9999	90	05	03	02	00	0573	1
022	73	CHEV	MALI	1D29K3R431419	017271	1272	2	15000	00000	70	05	25	0174	70	10	10	10	00	1272	1
023	73	CHEV	CAPR	1N39R35135517	011681	1172	1	11681	00000	80	05	15	0174	00	80	01	15	04	0174	1
024	73	CHRY	NEWP	CL41M3C175710	012518	9999	1	00000	00000	00	00	00	9999	00	00	00	00	00	9999	9
025	73	DATS	DELU	LB110446240	007684	1273	1	07700	00000	25	00	75	9999	25	25	00	00	[illegible]	9999	9
026	73	DODG	DART	LL41C3R220545	010134	0573	1	08000	00000	50	50	00	1073	00	30	30	[illegible]	[illegible]	9999	2
027	73	DODG	CHAR	WL21C3G156590	014941	0273	1	14925	00000	40	00	60	9999	60	15	10	15	00	9999	[illegible]
028	73	FORD	STAW	3X12K2576630	008306	0473	1	08[illegible]	00000	50	10	40	0173	40	20	00	40	00	1173	1
029	73	FORD	MAVE	3K92T241935	011160	0673	1	11000	00000	90	05	05	9999	00	05	10	[illegible]	[illegible]	9999	9
030	73	FORD	MAVE	3K92F228011	012278	0673	1	10000	00000	80	10	10	1273	30	05	20	[illegible]	00	0973	2
031	73	FORD	MUST	3F04H198072	008341	0973	1	21500	00000	75	15	10	1173	65	25	00	1[illegible]	[illegible]	1173	1
032	73	FORD	TORI	F3A31H193041F	024197	0173	1	21000	03000	60	00	40	0973	50	20	00	[illegible]	[illegible]	9999	3
033	73	FORD	LTD	F3G625213417F	013655	0373	1	12000	00000	80	10	10	1173	00	75	25	00	00	0873	2
034	73	FORD	STAW	F3U7651870037	009852	0974	1	07300	00000	10	90	00	1273	[illegible]	[illegible]	05	1[illegible]	00	1173	1
035	73	MAZD	RX2	S122A139998	008733	0273	1	08000	00000	90	10	00	0374	50	10	20	20	00	0374	1
036	73	MERC	MARQ	3263N570756	018104	9999	1	00000	00000	00	00	00	9999	00	00	00	00	00	9999	9
037	73	OLDS	CUTL	3J57K3R153699	014957	0273	1	12000	00000	95	00	05	1273	[illegible]	[illegible]	01	01	[illegible]	1273	2
038	73	OLDS	DELT	3N39T3M173128	022619	1272	1	12000	00000	40	10	50	9999	30	40	00	20	[illegible]	9999	1
039	73	PLYM	SATE	RP23G3G226208	007412	0673	1	07400	00000	75	20	05	9999	70	10	10	10	[illegible]	9999	1
040	73	PLYM	FURY	PP23K3D191196	015003	0373	1	09000	00000	85	10	05	0274	20	[illegible]	00	10	00	0274	2
041	73	PONT	VENT	2Y27M3L100888	024448	0973	1	18000	00000	99	01	00	0174	35	10	00	35	[illegible]	0174	2
042	73	PONT	BONN	2N69R3X168574	016286	0473	1	16000	00000	30	30	40	1273	30	20	20	40	[illegible]	1273	1
043	73	TOYO	CORO	RT85056713	022101	0373	1	20000	00000	40	10	[illegible]	9999	[illegible]	10	05	05	00	9999	1
044	73	VOLK	SEDA	1332183677	018637	1172	1	12000	00000	80	15	[illegible]	0374	90	00	00	00	00	1273	9
045	73	VOLK	STAW	2232091328	015214	0373	1	13000	00000	[illegible]	[illegible]	20	1173	[illegible]	05	05	25	05	0174	1
046	72	BUIC	LESA	4N69J2X166508	030443	0472	1	13000	17000	90	[illegible]	05	0272	60	15	15	10	[illegible]	0272	2
047	72	BUIC	ELEC	4V39T2H460037	027901	0372	1	15000	12000	[illegible]	[illegible]	[illegible]	0374	70	05	20	05	00	1272	1
048	72	CHEV	VEGA	1V77B24429937	016940	0772	1	09000	07000	90	[illegible]	00	[illegible]	90	10	00	00	00	0673	2
049	72	CHEV	VEGA	1V11B24340494	037243	9999	1	00020	00000	[illegible]	[illegible]	00	9999	[illegible]	[illegible]	00	20	[illegible]	9999	[illegible]
050	72	CHEV	NOVA	1X27F2L139581	017099	1173	2	01000	00000	[illegible]	10	05	1273	[illegible]	05	05	03	[illegible]	1273	4
051	72	CHEV	MONT	1H57H2R540444	044251	0972	1	08000	16000	[illegible]	10	10	0374	[illegible]	05	00	15	[illegible]	1273	[illegible]
052	72	CHEV	NOVA	1X27H2616552[illegible]	015931	0772	1	10000	35000	20	70	10	0174	80	10	10	00	[illegible]	1073	2
053	72	CHEV	STAW	1H46T2R603079	021905	1072	1	16000	31000	70	10	20	0374	15	35	20	30	00	0374	1
054	72	CHEV	IMPA	1M47R2S242106	029213	0472	1	16000	12000	40	30	30	0274	[illegible]	38	40	20	[illegible]	1073	1
055	72	DATS	STAW	PL510947837	015476	0374	2	44000	00000	99	00	01	0473	40	25	00	15	20	0373	2
056	72	DODG	DART	6H23G2B469289	022854	9999	1	20000	00000	[illegible]	10	[illegible]	9999	10	35	50	[illegible]	[illegible]	0973	2
057	72	DODG	POLA	DM23K2D264116	034244	0473	2	16000	30000	33	33	34	0874	10	20	20	[illegible]	[illegible]	0274	4
058	72	FORD	PINT	2X12X3387609	051322	1072	1	03000	00000	75	10	15	9999	10	05	30	35	[illegible]	9999	4
059	72	FORD	TORI	2A31F316866	035803	0772	1	20000	14000	75	15	10	0174	85	05	00	[illegible]	10	0174	2
060	72	FORD	GALA	2G54H159469	029764	1271	1	10000	15000	75	15	10	1173	10	20	10	60	00	1173	3

APPENDIX B,CONT'D

LISTING OF TEST VEHICLE USE AND MAINTENANCE DATA

HOUSTON

VEH	YR	MAKE	MODL	VIN	ODOM	PDATE	N	VMT1	VMT2	%C	%S	%F	LOC	%W	%G	%T	%V	%B	LTU	W
061	72	FORD	GRAN	2A31H117260	034595	1073	2	04000	00000	99	01	00	0374	00	25	50	25	00	9999	2
062	72	FORD	STAW	F2W74S114709	026146	0571	1	10000	10000	30	20	50	1073	05	25	40	30	00	10[illegible]	1
063	72	FORD	LTDB	2E66N112595	02[illegible]765	057[illegible]	1	10000	07000	50	10	40	9999	50	05	05	40	00	117[illegible]	2
064	72	LINC	MRK[illegible]	F2Y89A868751	024611	0572	1	12000	12000	75	[illegible]	16	0573	00	25	25	25	25	0573	1
065	72	MERC	STAW	2Z72S614430	040464	[illegible]	1	20000	20000	90	00	10	0174	10	40	10	40	00	0174	2
066	72	OLDS	DELT	3L69H2E127141	022222	1071	1	10000	12000	50	30	20	1073	20	60	10	10	00	1073	1
067	72	OLDS	STAW	3R45T2M543288	025384	0572	1	12000	13000	65	[illegible]	20	0274	00	40	40	20	00	0873	1
068	72	OPEL	STAW	549581[illegible]	008943	1272	1	04000	15000	99	01	00	99[illegible]	00	90	05	00	05	1273	2
069	72	PLYM	VALI	VL41C2R186278	047[illegible]67	01[illegible]	1	07000	21000	50	10	40	1273	20	10	6[illegible]	10	00	0174	2
070	72	PLYM	SATE	RH23G2G100160	[illegible]5472	087[illegible]	[illegible]	15000	08000	[illegible]	20	50	0174	00	30	50	20	00	9999	9
071	72	PONT	VENT	2Y27M2L117[illegible]	015372	1072	1	09000	06000	[illegible]	[illegible]	25	9999	50	20	20	10	00	0673	1
072	72	PONT	BONN	2N39Y2D[illegible]	014751	0872	1	08000	04000	[illegible]	25	25	0374	00	00	00	00	00	0873	[illegible]
073	72	TOYO	CARI	TA12049017	[illegible]17155	[illegible]	1	08000	00000	10	70	20	9999	50	00	00	[illegible]	50	9999	[illegible]
074	72	VOLK	SEDA	1113047954	[illegible]1271	0971	1	[illegible]	10000	[illegible]	[illegible]	10	9999	[illegible]	01	00	00	00	9999	1
075	72	VOLK	SEDA	1122016[illegible]	[illegible]2706	[illegible]	2	15000	00000	40	[illegible]	[illegible]	9999	[illegible]	05	00	65	00	1273	1
076	71	AMMO	JAVE	A1C797H[illegible]9512	[illegible]3974	1071	1	10000	10000	40	[illegible]	[illegible]	[illegible]	08	01	00	01	90	0973	[illegible]
077	71	BUIC	SKYL	433691[illegible]179	[illegible]	[illegible]	1	25000	24000	[illegible]	[illegible]	15	0174	[illegible]	90	00	10	00	9973	[illegible]
078	71	BUIC	ELEC	484391H443668	[illegible]	0471	1	07000	07000	[illegible]	[illegible]	[illegible]	0274	[illegible]	[illegible]	[illegible]	20	[illegible]	0373	1
079	71	CADI	SEDA	6834910158977	033566	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	30	0174	[illegible]	50	40	10	00	1073	4
080	71	CHEV	VEGA	141111V177850	033644	0371	1	12000	12000	[illegible]	[illegible]	05	9999	[illegible]	10	00	00	00	[illegible]	[illegible]
081	71	CHEV	MALI	136371R172654	[illegible]24489	0971	1	07000	07000	[illegible]	[illegible]	45	1273	01	43	45	10	01	9973	[illegible]
082	71	CHEV	IMPA	164[illegible]715155770	038364	0571	1	03000	02000	75	[illegible]	[illegible]	0274	25	[illegible]	10	00	05	0374	4
083	71	CHEV	IMPA	164391C151674	048591	[illegible]	1	[illegible]	[illegible]	[illegible]	[illegible]	30	0274	[illegible]	40	40	10	00	0174	[illegible]
084	71	CHEV	MALI	136371R100692	034785	0472	2	[illegible]	[illegible]	[illegible]	[illegible]	05	0274	00	[illegible]	10	10	00	9999	9
085	71	CHEV	IMPA	1G4691S246250	046475	117[illegible]	[illegible]	16000	00000	[illegible]	12	00	9999	[illegible]	[illegible]	[illegible]	00	00	9999	9
086	71	CHRY	300	CS23T1C158821	051449	[illegible]	1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1273	[illegible]	[illegible]	[illegible]	25	00	0773	9
087	71	DATS	2110	LB11[illegible]57174	[illegible]43000	0671	1	15000	12000	[illegible]	15	[illegible]	0274	50	[illegible]	[illegible]	20	00	[illegible]	[illegible]
088	71	DODG	CHAR	WH23C1G227134	[illegible]	1271	1	[illegible]	[illegible]	[illegible]	[illegible]	50	0274	55	[illegible]	15	[illegible]	00	[illegible]	[illegible]
089	71	FORD	PINT	1X1[illegible]X1[illegible]	[illegible]	[illegible]	1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0274	75	[illegible]	[illegible]	00	05	[illegible]	1
090	71	FORD	MAVE	1K19T162412	039087	[illegible]	1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0274	[illegible]	[illegible]	[illegible]	05	00	[illegible]	[illegible]
091	71	FORD	TORI	1A30F285594	[illegible]19448	[illegible]	1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	75	10	00	15	00	0174	1
092	71	FORD	GALA	1W54H196193	[illegible]	[illegible]	1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0274	75	[illegible]	[illegible]	[illegible]	00	1173	4
093	71	FORD	BROU	1G66N139106	080447	1171	1	12000	12000	75	[illegible]	[illegible]	[illegible]	[illegible]	40	[illegible]	10	00	[illegible]	[illegible]
094	71	MERC	MONT	1Z48S536475	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0174	[illegible]	[illegible]	05	00	00	[illegible]	[illegible]
095	71	OLDS	STAW	3[illegible]6361M174619	[illegible]30717	0471	1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1173	40	[illegible]	[illegible]	10	00	0973	1
096	71	OLDS	98	386391M472345	[illegible]	[illegible]	1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	00	[illegible]	10	10	50	1073	4
097	71	PLYM	DUST	VL29C1B[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0274	[illegible]	10	10	10	20	0174	2
098	71	PLYM	SATE	RH31G1G179250	[illegible]	1171	1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0274	40	[illegible]	40	10	00	1273	[illegible]
099	71	PONT	LEMA	[illegible]	[illegible]	[illegible]	1	[illegible]	[illegible]	[illegible]	[illegible]	15	0274	[illegible]	[illegible]	10	20	10	0174	[illegible]
100	71	PONT	GRNP	[illegible]	[illegible]	[illegible]	1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1173	[illegible]	10	00	25	10	1174	1
101	71	TOYO	CORO	KE20[illegible]	[illegible]	[illegible]	1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	10	10	00	00	[illegible]	4
102	71	VOLK	SEDA	1113026420	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	10	10	10	10	0973	[illegible]
103	70	BUIC	ELEC	484390H[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0274	[illegible]	[illegible]	[illegible]	00	00	[illegible]	4
104	70	CHEV	CHEV	133690R169352	[illegible]	[illegible]	1	15000	16000	[illegible]	[illegible]	[illegible]	0274	[illegible]	[illegible]	[illegible]	10	00	1273	4
105	70	CHEV	CAMA	124870L[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1273	[illegible]	[illegible]	[illegible]	[illegible]	00	[illegible]	4
106	70	CHEV	IMPA	164690C194815	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	20	10	00	[illegible]	1
107	70	CHEV	IMPA	164370J106881	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	25	00	[illegible]	[illegible]
108	70	CHEV	BELA	156690R113611	[illegible]	[illegible]	[illegible]	15000	12000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	25	00	1273	4
109	70	CHEV	STAW	[illegible]	051136	[illegible]	1	10000	12000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	00	0174	1
110	70	DODG	POLA	DL43L0D104386	[illegible]	0171	[illegible]	15000	20000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	05	00	[illegible]	[illegible]
111	70	FORD	MAVE	0K91T351446	[illegible]	[illegible]	1	16000	26000	70	10	[illegible]	0274	70	[illegible]	[illegible]	05	00	[illegible]	[illegible]
112	70	FORD	FAIR	0A35F26[illegible]	[illegible]	[illegible]	[illegible]	11000	00000	[illegible]	[illegible]	[illegible]	9999	[illegible]	[illegible]	[illegible]	[illegible]	00	0873	4
113	70	FORD	CUST	0D53H131123	[illegible]	0170	1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	1273	[illegible]	[illegible]	15	10	[illegible]	0673	[illegible]
114	70	FORD	MUST	0T01H101136	[illegible]	1070	1	15000	25000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	10	[illegible]	[illegible]	1
115	70	FORD	STAW	0073Y113652	[illegible]	[illegible]	1	[illegible]	13000	[illegible]	[illegible]	[illegible]	1273	00	40	[illegible]	40	[illegible]	[illegible]	1
116	70	MERC	MARQ	F0Z763K624839	147392	1970	1	12000	12000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	00	[illegible]	00	[illegible]	1
117	7[illegible]	OLDS	CUTL	342570Z129669	[illegible]	[illegible]	1	10000	10000	[illegible]	[illegible]	[illegible]	1273	[illegible]	30	[illegible]	00	[illegible]	[illegible]	[illegible]
118	70	OLDS	DETL	364370E113519	[illegible]	0171	[illegible]	[illegible]	10000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	00	[illegible]	4
119	70	PLYM	FURY	PM43G0D[illegible]	[illegible]	[illegible]	[illegible]	11000	00000	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	04	06	00	[illegible]	4
120	70	PLYM	FURY	PM43G0F16[illegible]	[illegible]	[illegible]	1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	00	[illegible]	00	[illegible]	00	[illegible]	[illegible]

APPENDIX B,CONT'D

LISTING OF TEST VEHICLE USE AND MAINTENANCE DATA

HOUSTON

VEH	YR	MAKE	MODL	VIN	ODOM	PDATE	↓	VMT1	VMT2	%C	%S	%F	LOC	%W	%G	%T	%V	%B	LTU	W
121	70	PONT	FIRE	223870L101449	058352	0570	1	02600	02600	60	20	20	1273	70	10	05	05	10	1273	1
122	70	PONT	CATA	252390X153371	081172	0170	1	20000	20000	90	00	10	0174	10	00	00	00	90	0174	2
123	70	TOYO	STAW	RT78L25168	041035	1270	1	12000	14000	75	10	15	0374	65	15	05	15	00	1173	1
124	70	VOLK	SEDA	1102039569	075858	9969	1	20000	20000	20	60	20	9999	70	10	00	15	05	0274	4
125	69	AMMO	JAVE	A9C79M211765	043807	0174	2	00000	00000	90	00	10	0274	05	05	00	00	90	9999	9
126	69	BUIC	SKYL	444379K14924	064987	0274	2	00000	00000	90	00	10	0274	85	10	00	00	05	0274	1
127	69	CHEV	CAMA	123379N604507	041290	9969	1	15000	10000	30	00	70	9999	60	20	05	05	10	9999	2
128	69	CHEV	STAW	136469K473562	064093	9969	1	20000	18000	75	20	05	0274	65	10	15	10	00	0274	2
129	69	CHEV	NOVA	114279W301306	024016	9969	1	00000	00000	95	00	05	0174	00	85	00	15	00	9999	9
130	69	CHEV	IMPA	164699R043813	047482	0169	1	06000	06000	50	00	50	1073	00	20	30	50	00	0473	9
131	69	CHEV	IMPA	164699R049211	127034	9969	1	36000	38000	20	60	20	9999	80	05	05	05	05	1173	4
132	69	CHEV	STAW	164369R056879	079598	0272	2	09500	09500	80	05	15	1173	02	28	50	20	00	0773	4
133	69	CHRY	TOWN	CP46G9C198720	066029	0370	2	14000	14000	60	20	20	0174	10	50	20	20	00	0973	3
134	69	DODG	DART	LL41B9B100643	054743	9969	1	00000	00000	80	10	10	0374	85	05	05	05	00	0374	2
135	69	FORD	STAW	9D73F123492	056534	1269	1	10000	11000	50	10	40	0274	00	30	30	40	00	0673	4
136	69	FORD	MUST	9F02F203093	073051	0570	2	12000	12000	50	20	30	0274	80	94	00	10	00	0999	4
137	69	FORD	MUST	9F01M127826	075285	9969	1	18000	20000	85	10	05	0274	75	15	10	00	00	0274	4
138	69	FORD	STAW	9K38M168825	080807	0469	1	15000	20000	80	05	15	1273	10	40	40	10	00	1273	2
139	69	FORD	STAW	9E76Y238923	071796	0669	1	13000	18000	60	30	10	1173	10	30	40	10	10	1273	4
140	69	MERC	MONT	9Z72X569642	066167	9969	1	15000	15000	05	40	55	1173	08	37	30	15	10	0673	2
141	69	OLDS	DELT	364399E136206	061586	0273	2	16000	00000	85	10	05	1073	75	10	10	02	03	0673	3
142	69	PLYM	BARR	BH29F8B308122	071407	9969	1	15000	18000	60	15	05	0274	15	75	00	10	00	0174	2
143	69	PONT	LEMA	237379R1409	060722	0570	1	10000	20000	80	10	10	9999	75	10	00	10	05	9973	2
144	69	PONT	CATA	252699R148059	075383	0472	2	12000	12000	80	00	20	1173	00	50	30	20	00	1173	4
145	69	VOLK	SEDA	119854738	029022	1069	2	08000	08000	90	00	10	9999	90	00	00	10	00	0473	4
146	68	AMMO	RAMB	A85060A295247	066325	9968	1	06000	20000	75	25	00	0174	00	15	00	10	75	1273	2
147	68	BUIC	ELEC	484398H333191	071611	9971	2	12000	12000	80	00	20	9999	00	50	35	15	00	0374	2
148	68	CADI	DEVI	B8228612	078013	9971	2	00000	00000	30	40	30	0973	10	10	00	00	80	0973	2
149	68	CHEV	CAMA	123378L316552	073131	0168	1	05000	05000	60	00	40	1073	80	10	10	00	00	1073	2
150	68	CHEV	BELA	156698S203114	036525	0468	1	06000	06000	60	30	10	9999	00	40	30	30	00	0473	4
151	68	CHEV	BELA	156458R112828	075692	1269	2	12000	12000	90	10	00	0374	00	10	50	10	00	9999	9
152	68	CHEV	MALI	136398K175374	097511	0668	1	20000	25000	10	40	50	9999	90	05	05	00	00	1173	2
153	68	CHEV	CAPR	166458S173407	069825	0468	1	10000	10000	50	50	00	0174	00	50	00	40	10	0973	2
154	68	DODG	POLA	DL41G6D321476	10148[illegible]	0768	1	20000	15000	75	20	05	1273	20	20	20	40	00	0973	4
155	68	FORD	MUST	8F01T24586	058638	9968	1	10000	10000	90	05	05	1273	60	20	00	20	00	0274	4
156	68	FORD	MUST	8T03C108099	079327	0668	1	20000	00000	70	20	10	1273	50	10	03	30	07	1273	2
157	68	FORD	FAIR	8A34F117044	081110	0170	2	12000	12000	60	05	35	0174	75	15	10	00	00	0174	4
158	68	FORD	STAW	8U75Y155135	082824	1168	1	15000	15000	70	20	10	0374	05	20	15	10	50	1273	2
159	68	MERC	STAW	8Z76Y609227	063186	0773	2	01000	00000	50	25	25	0274	25	50	00	25	00	0274	1
160	68	OLDS	CUTS	336878M379728	062774	9968	1	08000	08000	85	05	10	0973	50	25	00	25	00	9973	2
161	68	PLYM	FURY	PE41F8D183423	042736	9971	2	05000	10000	05	00	95	1073	95	05	00	00	00	0873	3
162	68	PONT	CATA	252698E152871	074703	9970	2	10000	15000	70	15	15	9999	90	06	03	01	00	0973	2
163	68	VOLK	SEDA	118201875	012293	9967	2	33000	00000	80	05	15	0174	95	01	01	01	02	0274	9
164	67	AMMO	REBE	A7KA55G193243	062715	0967	1	13000	09000	20	30	50	0374	65	10	10	10	05	0773	2
165	67	BUIC	LESA	454697C111569	077826	0367	1	00950	01100	75	05	25	0374	01	95	04	00	00	0973	4
166	67	CADI	DEVI	B7137428	079547	1266	1	10000	10000	80	10	10	1273	00	50	00	30	20	1273	2
167	67	CHEV	CHEL	131117Z159510	061442	9967	1	00000	00000	85	10	05	0973	40	50	00	01	09	9999	9
168	67	CHEV	IMPA	164877S126566	060516	1172	2	14000	04000	99	00	00	0174	90	05	00	00	05	1273	4
169	67	CHEV	BISC	154697R160242	085064	1067	1	15000	15000	80	10	10	0174	60	10	50	10	15	0773	4
170	67	CHEV	CAPR	166397R114353	080136	9968	2	12000	18000	70	20	10	0174	50	30	10	05	05	0673	4
171	67	CHRY	NEWP	CE41G73177768	053237	0167	1	06000	06000	95	00	05	0374	00	85	00	15	00	9999	2
172	67	DODG	CORO	WP41F77164464	100644	0167	1	10000	10000	60	20	20	9999	25	50	00	25	00	1173	4
173	67	FORD	CUST	7053C121055	083028	9967	1	12000	12000	40	05	55	0274	10	00	00	00	90	9973	2
174	67	FORD	MUST	7R01C219160	056396	9967	1	05000	06000	95	02	03	1073	03	93	04	00	00	0274	4
175	67	FORD	LTD	7062H12110	077296	0270	2	15000	10000	50	10	40	9999	00	50	00	50	00	1273	4
176	67	MERC	STAW	7Z76Q583876	091213	9999	2	01150	00000	95	05	20	0973	00	70	10	10	10	0374	4
177	67	OLDS	98	384397M380510	017039	9968	1	20000	30000	70	10	20	0174	40	20	00	00	40	1173	4
178	67	PLYM	BARR	BH23B72218101	100168	9967	1	10000	10000	75	00	25	9999	85	05	05	05	00	0573	2
179	67	PONT	LEMA	237177K127040	067168	9971	2	15000	15000	12	57	21	1273	95	02	00	03	00	1273	1
180	67	VOLK	SEDA	117460136	091649	9972	2	00000	00000	65	10	55	0374	65	05	15	15	00	0374	1

APPENDIX B

LISTING OF TEST VEHICLE USE AND MAINTENANCE DATA

DETROIT

VEH	YR	MAKE	MODL	VIN	ODOM	PDATE	N	VMT1	VMT2	%C	%S	%F	LOC	%W	%G	%T	%V	%B	LTU	W
001	74	BUIC	ELEC	4V37T4H424725	004013	0274	1	04000	00000	90	05	05	0174	90	05	00	05	00	9999	9
002	74	CHEV	MONT	1H57RH1607696	006469	0174	2	03400	03000	98	02	00	9999	00	50	50	00	00	9999	9
003	74	CHEV	IMPA	1L47H4J119976	002264	0274	1	02200	00000	80	10	10	9999	05	70	10	10	05	9999	9
004	74	DODG	DART	LH23G4B154146	004037	0274	1	04000	00000	70	00	30	0574	15	15	20	25	25	9999	9
005	74	FORD	TORI	4B30F150576	007183	1273	1	07000	00000	95	00	05	9999	75	25	00	00	00	0474	1
006	74	FORD	LTD	4G67H145686	008286	0274	1	08000	00000	70	05	[illegible]	0674	30	10	20	05	35	9999	9
007	74	OLDS	CUTL	3J57K4M152321	004191	0574	1	04189	00000	95	03	02	0574	80	05	05	05	05	9999	9
008	74	PLYM	SATE	RP23G4R157053	011143	0374	1	04000	00000	70	20	10	0474	70	10	10	10	00	9999	9
009	74	PONT	BONN	2N69A4P125350	011628	0274	1	08000	00000	30	30	40	9999	30	20	10	40	00	0274	1
010	74	VOLK	SEDA	1342019647	004876	0174	1	04800	00000	50	00	50	0374	50	10	00	00	40	0374	1
011	73	AMMO	HORN	A3C037A745446	013030	0373	1	10000	00000	75	20	05	0374	65	25	05	05	00	9999	9
012	73	BUIC	LESA	4N57H3H539019	012062	0473	1	12000	00000	50	50	00	9999	00	00	00	00	00	9999	9
013	73	BUIC	LIMI	4V37T3H503578	017504	0273	1	15000	00000	00	30	70	9999	20	05	00	50	25	0174	2
014	73	CADI	DEVI	6049R30145858	018699	1173	2	09000	09000	80	10	10	0574	10	02	06	02	80	1173	1
015	73	CAPR	SEDA	GAEML45043	033084	1172	1	24000	00000	20	70	10	9999	70	10	00	15	05	0574	4
016	73	CHEV	STAW	1V1583U139642	025618	1072	1	08000	18000	30	10	60	0474	70	10	10	10	00	0673	4
017	73	CHEV	CAMA	1Q87D3N142399	030182	0274	1	20000	00000	90	10	00	9999	75	15	00	10	00	9999	9
018	73	CHEV	CHEV	1C37F3147347 9	010983	0373	1	10000	00000	90	05	05	9999	90	05	05	00	00	9999	1
019	73	CHEV	MONT	H57H31423477	029527	1172	1	20000	02000	75	25	25	0574	90	10	00	00	00	0174	1
020	73	CHEV	CHEV	1D29H3B563250	017158	9999	1	00000	00000	00	00	00	9999	00	00	00	00	00	9999	9
021	73	CHEV	LAGU	1E37H31460424	017954	0273	1	12000	00000	50	20	30	1173	60	20	00	20	00	1173	2
022	73	CHEV	MONT	1H57K31423956	012124	1272	1	03000	09000	90	05	05	0174	00	40	40	20	00	0274	2
023	73	CHEV	CAPR	1N39R31124939	018139	0172	1	10000	07000	00	00	00	0674	00	00	00	00	00	0574	2
024	73	CHRY	NEWY	CS41T3C277716	023139	0573	1	20000	00000	25	00	75	9999	50	10	00	40	00	9999	9
025	73	DATS	SEDA	HLS3069719	022415	0873	1	00000	00000	50	50	00	9999	00	00	00	00	00	9973	1
026	73	DODG	DART	LH23C3B593482	010742	0973	1	10000	00000	98	01	01	0474	90	02	06	01	01	9999	9
027	73	DODG	DART	LL29G3B502038	018502	0673	1	17000	00000	80	05	15	9999	60	05	05	05	25	0473	3
028	73	FORD	PINT	3X11X184711	034939	0673	1	27000	00000	40	40	20	0574	50	05	05	40	00	1273	2
029	73	FORD	MAVE	3F93T238102	013304	0873	1	12000	00000	10	35	55	0674	00	10	35	00	55	9999	1
030	73	FORD	MUST	3F03F143027	016308	1172	1	08000	08000	60	30	10	1173	10	40	40	00	10	1173	1
031	73	FORD	LTD	3W68H240940	014044	0673	1	14000	00000	90	05	05	9999	85	05	05	05	00	9999	9
032	73	FORD	MUST	3F01H102307	019151	0273	2	10000	00000	60	10	30	0574	50	30	00	20	00	9973	1
033	73	FORD	STAW	13W765180378	018128	0673	1	18000	00000	05	25	70	0574	30	00	00	70	00	1173	4
034	73	FORD	LTD	3W63S210432	007726	1073	1	07000	00000	50	40	10	0474	00	70	10	10	10	0174	1
035	73	MAZD	SEDA	S122A141453	020918	1272	1	10000	10000	80	15	05	1273	75	05	00	20	00	1273	1
036	73	MERC	MARQ	3B62N512724	011969	0373	1	12000	00000	75	20	05	0574	35	20	35	10	00	9999	9
037	73	OLDS	CUTL	3J57K3M205377	022342	1172	1	10000	10000	90	02	08	1173	01	49	01	49	00	0574	1
038	73	OLDS	98	3V37T3M105790	027484	0273	1	25000	25000	60	20	20	0674	05	05	05	05	80	0274	2
039	73	PLYM	FURY	PM41G3D164143	023865	0673	2	14000	00000	80	00	20	9999	75	10	05	05	00	9999	4
040	73	PLYM	FURY	PH43K3D35930	027696	0473	1	09000	15000	80	05	15	0474	60	20	10	10	00	9999	1
041	73	PONT	VENT	2Y17M3W142468	013731	0673	1	15000	00000	90	05	05	0574	90	00	05	05	00	0574	1
042	73	PONT	GRNA	2H37R3P124265	019593	1073	2	07000	20000	75	13	12	0174	00	40	25	25	10	0673	4
043	73	TOYO	CELI	RA20187976	025620	0474	1	24000	00000	20	50	30	0474	60	10	30	00	00	0773	4
044	73	VOLK	SEDA	1132468618	010462	0273	1	06000	04400	90	05	05	0674	50	00	00	25	25	0573	2
045	73	VOLK	SEDA	4232087052	006251	0174	2	04000	00000	70	20	10	0474	50	20	10	10	10	0474	2
046	72	BUIC	LESA	4L57H2X208185	040949	0572	1	17000	17000	75	25	00	0174	10	05	05	10	70	1273	2
047	72	BUIC	CENT	4P47T2X145893	046677	0372	1	20000	20000	25	25	50	0674	70	02	03	25	00	0973	1
048	72	CHEV	VEGA	1V77B2V434008	016804	0872	1	04000	12000	40	30	30	0474	00	50	30	20	00	0474	1
049	72	CHEV	NOVA	1X27D2W347330	016215	0672	1	08000	08000	80	10	10	9973	00	30	00	70	00	9999	9
050	72	CHEV	MALI	1037F2K61 866	011575	0772	1	05000	06575	90	05	05	0674	80	10	00	00	10	0674	3
051	72	CHEV	STAW	1M35H21107308	024720	0971	1	08000	11000	75	05	20	0674	00	10	50	30	10	9999	9
052	72	CHEV	IMPA	1M47H21190097	025937	0174	2	10000	10000	30	60	10	0574	00	20	20	60	00	0574	2
053	72	CHEV	STAW	1D36J2K501542	025913	9973	2	12000	20000	80	10	10	9999	70	10	10	10	00	9999	2
054	72	CHEV	CAPR	1N39R2T265523	020107	0672	1	10000	10000	40	25	35	0374	00	20	10	20	50	0373	1
055	72	DATS	SEDA	PL510338664	028654	0272	1	10000	15000	50	10	40	0474	50	10	10	25	05	0474	2
056	72	DODG	DART	LH23G2B189318	022614	1073	2	01000	00000	90	05	05	9999	98	02	00	00	00	0174	2
057	72	DODG	POLA	DL41K2D255266	024745	9972	1	01500	10000	50	00	50	1173	00	00	50	50	00	9999	4
058	72	FORD	PINT	2X11X336888	029268	0872	1	15000	15000	50	25	25	0474	70	25	00	05	00	0474	4
059	72	FORD	TORI	2H30F245079	023542	0872	1	10000	10000	75	20	05	0174	75	20	00	05	00	0174	4
060	72	FORD	LTD	2W64H248247	009924	0972	1	02000	07400	00	00	00	0674	25	50	25	00	00	9999	9

APPENDIX B,CONT'D

LISTING OF TEST VEHICLE USE AND MAINTENANCE DATA

DETROIT

VEH	YR	MAKE	MODL	VIN	ODOM	PDATE	N	VMT1	VMT2	%C	%S	%F	LOC	%W	%G	%T	%V	%B	LTU	W
061	72	FORD	GALA	2W58H102965	027609	0772	1	13000	14000	80	10	10	0674	75	06	01	03	05	0574	2
062	72	FORD	STAW	2W76S103703	014923	0173	2	10000	00000	40	30	30	0374	00	15	00	85	00	0973	1
063	72	FORD	THUN	2Y87N117981	038738	1172	1	11000	18000	60	10	30	0674	45	15	10	30	00	0574	2
064	72	LINC	CONT	2Y82A886423	027324	0172	1	12000	15000	50	25	25	0574	00	20	20	60	00	1273	1
065	72	MERC	MONT	2Z44S651102	011328	0972	1	06000	05300	85	10	05	9999	00	50	50	00	00	9999	9
066	72	OLDS	CUTL	3J57H2M137966	025114	0873	2	08000	00000	80	15	05	0574	70	10	00	10	10	0574	1
067	72	OLDS	98	3V37T2M574071	049183	0872	1	35000	14000	60	15	25	1173	10	10	10	05	65	1173	2
068	72	OPEL	SEDA	539557267	026272	0672	1	00000	00000	80	10	10	0574	80	05	00	15	00	0574	1
069	72	PLYM	VALI	VH23C2R319241	035144	1272	2	20000	00000	70	10	20	0474	60	10	05	20	05	0773	2
070	72	PLYM	FURY	PH41G2D340492	040878	0972	1	12000	20000	30	30	40	0674	20	05	05	10	60	0474	3
071	72	PONT	CATA	2L39M2P385699	037511	0772	1	18000	17000	80	15	05	0674	02	01	10	05	82	0574	4
072	72	PONT	BONN	2N69V2P384723	014979	0872	1	07000	08000	75	10	15	0173	00	40	40	20	00	0473	2
073	72	TOYO	CORO	TE27037171	016765	0272	1	08000	08000	95	04	01	0274	80	05	05	05	05	0274	1
074	72	VOLK	SEDA	1122925058	026719	1072	1	16000	10000	50	25	25	9999	50	10	10	20	10	9999	1
075	72	VOLK	SEDA	1122104808	004960	0872	1	01800	03000	98	02	00	1073	98	02	00	00	00	1073	2
076	71	AMMO	STAW	A1A187H272282	041857	0472	2	12000	12000	75	15	10	0174	60	15	15	10	00	0374	1
077	71	BUIC	LESA	454571X154629	045074	0471	1	15000	15000	90	05	05	0274	80	10	05	05	00	0274	2
078	71	BUIC	ELEC	484391H80130	055308	0672	2	30000	20000	99	01	00	1273	00	00	00	00	00	1273	2
079	71	CADI	DEVI	6834910225694	036481	0374	2	09000	00000	80	10	10	9999	90	02	02	04	02	9999	9
080	71	CHEV	VEGA	141771U303526	023160	0671	1	09000	09000	30	65	05	0674	80	05	15	00	00	0973	4
081	71	CHEV	MALI	136371K211488	033501	0671	1	00000	00000	75	15	10	0674	70	10	05	10	05	9999	9
082	71	CHEV	MONT	138571K127026	048507	0173	2	12000	00000	85	00	15	0574	75	10	00	15	00	0574	3
083	71	CHEV	STAW	156451J170424	028274	0971	1	11000	11000	75	12	13	0574	90	05	05	00	00	0174	2
084	71	CHEV	MALI	136671K225190	029416	0172	2	15000	10000	50	50	00	0774	40	05	15	40	00	1073	4
085	71	CHEV	IMPA	1644711213896	043860	0971	1	15000	20000	60	30	10	0474	80	00	20	00	00	1273	9
086	71	CHRY	300	CS43T1C142944	042679	9999	2	14000	11000	20	40	40	0474	30	10	20	40	00	1173	4
087	71	DATS	SEDA	LB110760746	037251	9972	2	00000	00000	90	[illegible]	10	9990	75	15	00	10	00	0474	4
088	71	DODG	CHAR	WP29G1A139041	039153	1272	1	11000	12000	40	00	60	0674	80	15	05	00	00	0574	4
089	71	FORD	PINT	1X11X296512	026379	9972	2	06000	12000	15	10	75	0174	90	00	10	00	00	0674	2
090	71	FORD	MAVE	1K91T126748	029631	1071	1	05500	03000	50	01	[illegible]	0474	00	50	50	00	00	9999	9
091	71	FORD	TORI	1H25F114099	040376	9971	2	10000	15000	80	10	10	0274	80	10	00	05	05	1273	1
092	71	FORD	LTD	1W63H137880	021239	1271	2	08000	08000	85	10	05	0574	00	30	[illegible]	[illegible]	[illegible]	0574	4
093	71	FORD	LTD	1W62S242006	038888	0173	2	11000	12000	95	05	00	0474	00	50	50	00	00	0274	2
094	71	MERC	MONT	1B44S535448	041756	0471	1	11500	13000	60	30	10	0574	20	40	20	20	00	0674	1
095	71	OLDS	CUTL	336871M125016	027467	9971	1	09000	09000	70	15	15	9999	70	00	10	10	10	9999	2
096	71	OLDS	DELT	364571M436333	051454	0572	2	15000	15000	50	25	25	0973	60	10	10	10	00	0973	4
097	71	PLYM	VALI	YL41C1B412901	012055	0671	1	04000	04000	85	15	00	0474	00	85	05	10	00	9999	9
098	71	PLYM	SATE	RH41C1R120798	017179	0572	2	05000	07000	80	15	05	0773	[illegible]	[illegible]	[illegible]	10	[illegible]	0574	4
099	71	PONT	F'RE	223871N113796	041210	9972	1	11000	10000	80	10	10	0574	[illegible]	[illegible]	25	25	[illegible]	0773	3
100	71	PONT	GTO	242371P139567	040396	9971	1	12000	12000	10	[illegible]	[illegible]	[illegible]	10	10	20	60	00	0374	4
101	71	TOYO	CORO	TE21002964	040648	0471	1	09500	09000	50	10	40	0474	60	10	10	20	00	0474	1
102	71	VOLK	SEDA	1113033089	025031	1171	1	11000	11000	[illegible]	15	[illegible]	9971	75	15	05	05	00	0674	4
103	70	BUIC	STAW	460460Y103225	066355	0470	2	15000	15000	85	[illegible]	[illegible]	0374	15	10	60	15	10	0474	4
104	70	CHEV	NOVA	113270W292130	040289	0470	1	10000	10000	75	10	15	0574	50	10	15	25	00	0574	2
105	70	CHEV	NOVA	114270W213873	091846	9970	1	12000	15000	[illegible]	10	10	0474	90	10	00	00	00	0374	4
106	70	CHEV	IMPA	164470U143850	047469	9970	1	10000	08000	[illegible]	[illegible]	[illegible]	0574	70	10	10	00	10	0773	3
107	70	CHEV	MONT	138570F133478	030560	9970	1	08700	07000	40	[illegible]	[illegible]	0574	60	10	20	10	00	0672	4
108	70	CHEV	IMPA	164370U104633	038224	9970	1	06500	08000	[illegible]	10	10	0171	30	20	20	20	10	9973	2
109	70	CHEV	CAPR	166390J282951	026862	0572		[illegible]	08000	80	[illegible]	10	1173	00	35	00	30	35	0474	2
110	70	DODG	POLA	DM23L0F262440	054509	0970	1	12000	15000	40	20	[illegible]	0674	20	05	10	30	35	0473	2
111	70	FORD	MAVE	0X91T418122	039895	0770	1	[illegible]	10000	[illegible]	[illegible]	30	1173	90	10	00	00	00	1173	[illegible]
112	70	FORD	FAIR	0B29F122631	067381	[illegible]	[illegible]	15000	15000	[illegible]	[illegible]	[illegible]	9999	80	05	05	10	00	1273	4
113	70	FORD	GALA	0W56H176534	048608	9970	[illegible]	[illegible]	08000	80	10	10	9999	70	10	10	10	00	9999	9
114	70	FORD	LTD	0W62H128391	031340	9970	1	[illegible]	[illegible]	00	[illegible]	[illegible]	0674	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	9973	2
115	70	FORD	LTD	0W64Y137185	064876	9999	2	08000	06000	50	[illegible]	[illegible]	9999	75	25	00	00	00	0473	2
116	70	MERC	MARA	0Z61N510116	053820	0971	2	[illegible]	06500	[illegible]	25	[illegible]	[illegible]	[illegible]	[illegible]	15	10	[illegible]	[illegible]	[illegible]
117	70	OLDS	CUTL	336870M160664	022208	9999	2	11000	11000	85	15	[illegible]	0474	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	4
118	70	OLDS	98	386390M17369	031699	[illegible]	[illegible]	[illegible]	00000	[illegible]	05	[illegible]	0374	75	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	2
119	70	PLYM	SATE	RH23G0A122157	039088	[illegible]	[illegible]	[illegible]	07000	[illegible]	[illegible]	50	9999	70	30	[illegible]	[illegible]	[illegible]	[illegible]	1
120	70	PLYM	FURY	PM29G0F260916	018402	0770	1	[illegible]	03500	34	33	33	[illegible]	25	25	[illegible]	[illegible]	25	[illegible]	[illegible]

APPENDIX B, CONT'D

LISTING OF TEST VEHICLE USE AND MAINTENANCE DATA

DETROIT

VEH	YR	MAKE	MODL	VIN	ODOM	PDATE	N	VMT1	VMT2	%C	%S	%F	LOC	%W	%G	%T	%V	%B	LTU	W
121	70	PONT	FIRE	224870N125955	036286	0670	1	00000	00000	80	20	00	0674	50	20	00	10	20	0674	2
122	70	PONT	STAW	252370P253175	059291	9970	2	00000	00000	80	10	10	0174	00	70	30	10	00	9999	2
123	70	TOYO	CORO	RT83014943	029386	0970	1	09000	07000	50	40	10	0474	25	15	10	15	35	0474	4
124	70	VOLK	SEDA	1102877904	043952	0973	2	08000	00000	10	20	70	0674	85	07	06	00	02	0274	1
125	69	AMMO	AMBA	A9C897T128631	071985	0370	2	14000	10000	75	15	10	0174	50	15	05	30	00	0174	4
126	69	BUIC	SPEC	433279Y2059	041589	0573	2	00000	00000	75	25	00	0574	90	00	05	00	00	0574	2
127	69	CHEV	BELA	155699J290549	042919	1169	1	12000	12000	95	05	00	9999	10	00	00	00	90	1073	2
128	69	CHEV	CHEV	136399K385810	042156	0269	1	09000	09000	70	15	15	0774	60	20	00	20	00	9999	9
129	69	CHEV	IMPA	164379V200454	074042	9969	1	00000	00000	50	25	25	0274	00	75	20	05	00	0274	2
130	69	CHEV	MALI	136379B409669	090935	0771	2	12800	20000	50	40	10	0574	50	40	00	10	00	1073	1
131	69	CHEV	STAW	164469J228456	049807	0669	1	08000	10000	90	05	05	0374	00	10	10	10	70	0174	4
132	69	CHEV	CAPR	166479F058624	067409	9971	2	12400	12400	85	05	10	0274	30	40	10	20	00	0274	4
133	69	CHRY	STAW	CP45G9C239470	069588	0369	1	10000	10000	80	00	10	0374	90	00	00	10	00	0374	2
134	69	DODG	DART	LH41B9B240240	032050	0169	1	05000	05000	40	00	60	0574	00	20	70	10	00	0174	4
135	69	FORD	FAIR	9H30F204099	051596	1170	2	12000	12000	75	10	15	0374	60	15	00	00	25	0374	4
136	69	FORD	FAIR	9H30F198495	041732	0669	1	12000	10000	90	05	05	9999	50	15	15	10	10	0673	1
137	69	FORD	MUST	9F01H148211	047150	9970	1	10000	10000	90	00	10	9999	90	10	00	00	00	9999	2
138	69	FORD	MUST	9F02M179386	017000	0573	2	10000	00000	75	10	15	0374	00	20	20	20	40	0374	2
139	69	FORD	GALA	9W54Y221492	042035	9969	1	11000	08000	50	20	30	1073	00	15	25	40	20	9999	1
140	69	MERC	MONT	9Z54X518228	058751	1068	1	07000	06500	90	10	00	0474	00	70	20	10	00	0474	1
141	69	OLDS	98	386699M379088	065309	1172	2	18000	20000	50	30	20	0474	00	00	20	00	80	0474	2
142	69	PLYM	FURY	PM43F9R291802	029832	0671	2	10000	10000	80	10	10	0674	30	50	10	10	00	1173	2
143	69	PONT	TEMP	235379P366916	057853	0969	1	11000	11000	85	05	10	9999	70	03	02	20	05	0973	4
144	69	RONT	CATA	252379P239715	072646	0871	2	19000	15000	50	35	15	0574	00	15	05	05	75	0873	4
145	69	VOLK	SEDA	119323801	083598	9972	2	20000	20000	50	00	50	0674	75	05	00	20	00	0674	2
146	68	AMMO	JAVL	A8A795B110355	041923	9973	2	00000	00000	95	05	00	0674	20	70	10	00	00	9999	4
147	68	BUIC	ELEC	482578H16162	051682	9972	2	10000	15000	25	50	25	0474	05	05	05	05	80	0274	4
148	68	CADI	DEVI	L8184905	093958	0471	2	15000	14000	10	20	70	0474	70	13	02	10	05	0474	2
149	68	CHEV	MALI	135378B168572	090947	0473	2	08000	17000	80	10	10	1173	40	10	00	40	10	1273	4
150	68	CHEV	IMPA	164678F175905	062881	0972	2	03500	07000	98	02	00	0674	00	50	50	00	00	0674	9
151	68	CHEV	IMPA	164878F190322	053656	9968	1	08000	10000	80	10	10	0174	80	05	05	10	00	1073	2
152	68	CHEV	MALI	136378K133525	048911	1071	2	05000	10000	50	30	20	0374	60	10	20	05	05	0274	4
153	68	CHEV	MALI	136378B130138	062871	0373	2	29000	00000	80	15	05	0374	40	15	05	40	00	0374	2
154	68	DODG	POLA	DL23C8R171169	064661	0268	1	15000	15000	60	20	20	0474	60	20	20	00	00	1173	4
155	68	FORD	FAIR	8K30T238777	055761	0171	2	07000	07000	75	20	05	0674	75	05	10	10	00	0674	4
156	68	FORD	MUST	8F01C124272	040729	0474	2	00000	00000	98	02	00	0574	80	05	15	00	00	9999	9
157	68	FORD	GALA	8W54F165097	043050	1069	2	15000	12000	00	98	02	0274	55	00	20	05	20	9999	9
158	68	FORD	TORI	8H44X129634	075337	0174	2	02000	00000	80	20	00	0574	90	05	00	05	00	0574	4
159	68	MERC	COUG	8F93F589173	058854	0968	1	17000	13000	10	20	70	0474	20	10	00	05	65	0474	3
160	68	OLDS	CUTL	3368781128228	049607	9968	1	07000	09000	60	30	10	0574	00	30	60	10	00	1173	9
161	68	PLYM	BELV	RL41D8A287599	041627	9972	2	10000	05000	90	10	00	0574	80	10	10	00	00	0374	2
162	68	PONT	BONN	262678P271851	052666	9973	2	04000	08000	80	10	10	0473	80	05	05	10	00	1173	3
163	68	VOLK	SEDA	118748291	044634	9968	2	05000	08000	50	50	00	0674	00	50	00	50	00	0772	1
164	67	AMMO	AMBA	A7KA97P100539	075509	0772	2	06000	10000	80	05	15	0774	02	01	00	92	05	1073	3
165	67	BUIC	LESA	452397H308763	048540	1167	1	12000	08000	99	01	00	0674	80	05	05	10	00	0873	1
166	67	CADI	DEVI	J72584/4Y3445	073829	9973	2	20000	00000	20	30	50	0374	80	05	05	10	00	0274	2
167	67	CHEV	CAMA	123377N224804	072280	0667	1	12000	00000	50	00	50	0474	75	05	10	00	10	1073	4
168	67	CHEV	IMPA	164697F125694	071555	9968	2	15000	15000	50	25	25	9999	75	10	10	00	05	9973	2
169	67	CHEV	IMPA	164877F242128	051615	9967	1	11000	10000	85	10	05	1073	90	05	05	00	00	0873	4
170	67	CHEV	STAW	156357F117833	102181	1068	2	25000	15000	15	70	15	1273	80	05	05	10	00	0374	9
171	67	CHRY	NEWP	CE23G73215684	052669	9970	2	07000	00000	60	20	20	0474	05	90	05	00	00	0773	3
172	67	DODG	MONA	DH43G79200174	033032	9967	1	08000	00000	80	10	10	0574	00	50	00	50	00	9999	9
173	67	FORD	GALA	7W55C218529	078855	9967	1	13000	15000	35	50	15	0674	65	15	20	00	00	0773	4
174	67	FORD	GALA	7W55O121895	063905	9973	2	04000	00000	00	99	01	0174	90	10	00	00	00	9973	4
175	67	FORD	GALA	7G55H192100	115070	0268	2	12000	20000	98	02	00	9999	98	02	00	00	00	9999	4
176	67	MERC	MONT	7Z47H568700	067972	0968	2	15000	06000	65	18	17	0574	60	05	10	25	00	1073	4
177	67	OLDS	CUTL	33617M359429	080312	1173	2	08000	00000	25	25	50	0674	70	05	01	24	00	1273	4
178	67	PLYM	BARR	BH23B7231572З	041765	0673	2	20000	00000	50	25	25	9999	90	00	00	10	00	0674	4
179	67	PONT	VENT	252877P241703	070776	0172	2	10000	10000	80	10	10	0374	50	10	30	10	00	0173	2
180	67	VOLK	SEDA	117841721	069586	1072	2	18000	02000	75	20	05	0374	75	20	00	05	00	0374	2

Appendix C - Listing of Federal Test Procedure Results on Individual Vehicles

Legend

VEH NO. - Vehicle Number, R suffix indicates a replicate test

YR - Model Year

MAKE - Vehicle Make

MODL - Vehicle Model

CID - Engine Displacement in Cubic Inches

TEST TYPE - Indicates the Portion of the Test or Composite.

COLD TRANS - Cold transient portion of test
COLD STAB - Cold stabilized portion of test
HOT TRANS - Hot transient portion of test
HOT STAB - Hot stabilized portion of test (not conducted on evaporative emissions test vehicles)
1972 FTP - Composite of cold transient and cold stabilized tests (equivalent to 1972 Federal Test Procedure)
1975 FTP - 1975 Federal Test Procedure composite
HOT START - Composite of hot transient and hot stabilized tests (not conducted on Evaporative Emission Test vehicles)
HFET - Highway Fuel Economy Test (not conducted in Houston)

HC - Hydrocarbon Emissions in grams per mile

CO - Carbon Monoxide Emissions in grams per mile

CO2 - Carbon Dioxide Emissions in grams per mile

NOXC - Oxides of Nitrogen Emissions Corrected for Humidity in grams per mile.

FUEL ECON - Fuel Economy Calculated by the Carbon Balance Method in miles per gallon

IHCL - Hydrocarbon Concentrations with Vehicle at Normal Idle, Measured with the Laboratory Instrumentation in parts per million carbon equivalent.

IHCG - Hydrocarbon Concentration with Vehicle at Normal Idle, Measured with Garage-type Instrumentation in parts per million Hexane equivalent (theoretically should be one-sixth IHCL)

Appendix C (cont)

ICOL - Carbon Monoxide Concentration with Vehicle at Normal Idle, Measured with Laboratory Instrumentation in per cent.

ICOG - Carbon Monoxide Concentration with Vehicle at Normal Idle, Measured with Garage-type Instrumentation in per cent.

OTHER TESTS - Lists Other Emission Factors Tests Conducted on the Vehicle

MODAL - Vehicles was used in the Modal Emissions Program
EVAP - Vehicle was used in the Evaporative Emissions Program
A/C - Vehicle was used in the Air Conditioned Vehicles Testing Program
LOADED- Vehicle was used in the Loaded Vehicles Testing Program
NONE - Vehicle was used only in the Federal Test Procedure Program

APPENDIX C

LISTING OF FEDERAL TEST PROCEDURE RESULTS ON INDIVIDUAL VEHICLES IN DENVER

```
                                                               MPG
VEH                              -----GRAMS PER MILE-----     FUEL
NO.  YR MAKE MODL CID TEST  TYPE   HC    CO     CO2   NOXC    ECON
------------------------------------------------------------------
001  74 BUIC RIVI 455 COLD TRANS  5.69 126.9  880.0   1.14     8.1
                      COLD  STAB  2.70  67.5  973.9   0.94     8.2
IHCL  2225PPM CARBON  HOT  TRANS  4.56 116.1  755.9   0.90     9.3
IHCG   130PPM HEXANE  HOT   STAB  3.59 121.7  910.3   0.67     8.0
ICOL  2.2 % CO
ICOG  1.7 % CO        1972   FTP  4.15  96.4  928.2   1.04     8.1
                      1975   FTP  3.84  93.4  893.8   0.97     8.4
OTHER TESTS:          HOT  START  4.06 119.0  835.1   0.78     8.6
        MODAL         HFET        2.10  81.4  603.5   0.75    12.0


002  74 CHEV CAPR 400 COLD TRANS  4.59 108.8  724.2   2.11     9.8
                      COLD  STAB  2.85  52.7  764.3   1.36    10.4
IHCL  1503PPM CARBON  HOT  TRANS  4.71 116.1  609.4   1.40    11.0
IHCG   150PPM HEXANE  HOT   STAB  3.21 110.3  702.9   0.76    10.0
ICOL  1.4 % CO
ICOG  1.9 % CO        1972   FTP  3.70  80.0  744.8   1.73    10.1
                      1975   FTP  3.73  82.1  712.9   1.53    10.4
OTHER TESTS:          HOT  START  3.94 113.2  657.4   1.07    10.5
        MODAL         HFET        2.02  76.5  512.4   1.29    13.9


003  74 CHEV NOVA 350 COLD TRANS  4.79  89.4  644.8   1.85    11.1
                      COLD  STAB  4.15  82.7  602.0   0.77    11.9
IHCL  9939PPM CARBON  HOT  TRANS  3.94 110.1  512.1   1.16    12.7
IHCG   520PPM HEXANE  HOT   STAB  5.24 160.1  530.1   0.46    11.1
ICOL  6.2 % CO
ICOG  6.6 % CO        1972   FTP  4.46  86.0  622.8   1.30    11.5
                      1975   FTP  4.23  91.7  586.0   1.10    11.9
OTHER TESTS:          HOT  START  4.60 135.8  521.4   0.80    11.8
        MODAL         HFET        4.21 127.9  396.4   0.76    14.5


004  74 DODG DART 318 COLD TRANS  4.07  65.8  601.6   2.53    12.4
                      COLD  STAB  3.37  76.2  562.5   1.22    12.8
IHCL  3183PPM CARBON  HOT  TRANS  3.19  55.9  517.0   2.49    14.4
IHCG   200PPM HEXANE  HOT   STAB  3.74  84.0  532.2   0.96    13.1
ICOL  4.2 % CO
ICOG  3.1 % CO        1972   FTP  3.71  71.1  581.5   1.86    12.6
                      1975   FTP  3.47  68.4  558.1   1.85    13.1
OTHER TESTS:          HOT  START  3.47  70.4  524.8   1.71    13.7
        MODAL         HFET        2.68  48.8  425.3   2.41    17.4

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS ON INDIVIDUAL VEHICLES IN DENVER

```
                                                                      MPG
VEH                                     -----GRAMS PER MILE-----     FUEL
NO.  YR MAKE MODL CID TEST  TYPE    HC     CO     CO2    NOXC     ECON
--------------------------------------------------------------------------
005  74 FORD MAVE 302 COLD TRANS  5.15   97.3   485.8   1.75     13.6
                      COLD  STAB  4.17   78.8   437.9   1.03     15.4
IHCL  3002PPM CARBON  HOT  TRANS  3.90   59.7   419.8   1.58     16.9
IHCG   240PPM HEXANE  HOT   STAB  3.90   66.0   421.9   1.09     16.5
ICOL  1.4 % CO
ICOG  1.1 % CO        1972   FTP  4.65   87.8   461.2   1.38     14.5
                      1975   FTP  4.30   77.4   442.9   1.34     15.4
OTHER TESTS:          HOT  START  3.90   62.9   420.9   1.33     16.7
       MODAL          HFET        2.84   55.7   332.3   1.21     20.7


006  74 FORD TORI 351 COLD TRANS  5.92  116.2   586.2   2.16     11.3
                      COLD  STAB  3.57   61.0   639.5   2.02     11.9
IHCL  2586PPM CARBON  HOT  TRANS  4.19   60.0   541.5   2.28     13.7
IHCG   190PPM HEXANE  HOT   STAB  3.45   62.5   617.4   1.92     12.2
ICOL  2.0 % CO
ICOG  1.8 % CO        1972   FTP  4.71   87.9   613.5   2.09     11.6
                      1975   FTP  4.23   72.3   601.2   2.12     12.2
OTHER TESTS:          HOT  START  3.81   61.2   580.5   2.10     12.9
       MODAL          HFET        2.72   55.9   401.7   2.16     17.8


007  74 OLDS CUTL 350 COLD TRANS  5.49  138.6   659.0   1.67      9.9
                      COLD  STAB  4.11   91.2   724.4   1.41     10.1
IHCL  2405PPM CARBON  HOT  TRANS  4.83  111.7   592.3   1.66     11.3
IHCG   130PPM HEXANE  HOT   STAB  4.28  112.5   681.6   1.08     10.2
ICOL  1.9 % CO
ICOG  1.6 % CO        1972   FTP  4.78  114.2   692.5   1.53     10.0
                      1975   FTP  4.60  106.8   674.0   1.53     10.4
OTHER TESTS:          HOT  START  4.55  112.1   638.1   1.36     10.7
       MODAL          HFET        3.35   78.9   451.0   1.64     15.2


008  74 PLYM SCAM 318 COLD TRANS  5.23   76.1   609.3   2.60     11.9
                      COLD  STAB  3.71   62.0   620.3   1.68     12.2
IHCL  2557PPM CARBON  HOT  TRANS  3.78   49.4   536.6   2.68     14.2
IHCG   220PPM HEXANE  HOT   STAB  4.19  101.2   582.8   1.35     11.8
ICOL  2.9 % CO
ICOG  4.4 % CO        1972   FTP  4.45   68.9   614.9   2.13     12.0
                      1975   FTP  4.05   61.5   594.8   2.15     12.6
OTHER TESTS:          HOT  START  3.99   76.0   560.3   2.00     12.8
       MODAL          HFET        2.66   40.4   407.7   2.39     18.5

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS ON INDIVIDUAL VEHICLES IN DENVER

```
                                                                           MPG
VEH                                   -----GRAMS PER MILE-----            FUEL
NO.  YR MAKE MODL CID TEST   TYPE     HC      CO      CO2     NOXC        ECON
------------------------------------------------------------------------------
009  74 PONT CATA 400 COLD  TRANS    5.30    72.9    747.6    3.64        10.1
                      COLD   STAB    3.75    57.4    729.2    3.32        10.7
IHCL  3382PPM CARBON  HOT   TRANS    4.03    59.2    605.1    5.08        12.5
IHCG   230PPM HEXANE  HOT    STAB    4.12    80.4    682.3    2.74        10.8
ICOL  4.9 % CO
ICOC  4.6 % CO        1972    FTP    4.50    64.9    738.1    3.48        10.4
                      1975    FTP    4.15    61.1    698.6    3.87        11.0
OTHER TESTS:          HOT   START    4.08    70.1    644.7    3.88        11.6
        MODAL         HFET           2.80    51.8    462.9    4.70        16.0


010  74 VOLK SEDA  97 COLD  TRANS    6.52    77.0    277.3    2.54        21.2
                      COLD   STAB    4.75    75.9    250.5    1.17        23.1
IHCL  7263PPM CARBON  HOT   TRANS    5.35    72.7    224.4    1.70        25.0
IHCG   350PPM HEXANE  HOT    STAB    5.44    93.7    246.7    1.05        21.6
ICOL  4.6 % CO
ICOG  4.5 % CO        1972    FTP    5.61    76.4    263.5    1.83        22.1
                      1975    FTP    5.29    75.2    248.9    1.60        23.1
OTHER TESTS:          HOT   START    5.39    83.5    235.9    1.36        23.1
        MODAL         HFET           1.65    40.0    196.6    2.13        33.5


011  73 AMMO GREM 232 COLD  TRANS    2.67    36.3    398.6    5.18        19.1
                      COLD   STAB    1.76    13.3    388.0    2.61        21.4
IHCL  3576PPM CARBON  HOT   TRANS    2.25    21.2    347.2    4.98        22.9
IHCG   700PPM HEXANE  HOT    STAB
ICOL  0.9 % CO
ICOG  1.3 % CO        1972    FTP    2.20    24.5    393.1    3.86        20.2
                      1975    FTP    2.09    20.3    378.9    3.80        21.3
OTHER TESTS:          HOT   START
   MODAL,EVAP         HFET           1.27     4.1    296.6    6.05        28.9


011R 73 AMMO GREM 232 COLD  TRANS    2.71    35.4    393.9    5.03        19.4
                      COLD   STAB    1.70    14.1    377.7    2.41        21.9
IHCL  3576PPM CARBON  HOT   TRANS    2.15    17.4    335.8    4.52        24.0
IHCG   700PPM HEXANE  HOT    STAB
ICOL  0.9 % CO
ICOG  1.3 % CO        1972    FTP    2.19    24.5    385.6    3.69        20.6
                      1975    FTP    2.04    19.5    369.4    3.54        21.8
OTHER TESTS:          HOT   START
   MODAL,EVAP         HFET           1.27     4.1    296.6    6.05        28.9

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN DENVER

```
                                                                       MPG
VEH                                     -----GRAMS PER MILE-----      FUEL
NO.  YR MAKE MODL CID TEST  TYPE    HC     CO     CO2    NOXC         ECON
---------------------------------------------------------------------------
012  73 BUIC CENT 350 COLD TRANS  4.65  122.2   807.9   2.66          8.7
                      COLD  STAB  2.16   47.6   794.6   1.78         10.1
IHCL  1591PPM CARBON  HOT  TRANS  2.50   75.2   665.0   2.58         11.2
IHCG    70PPM HEXANE  HOT   STAB  2.30   55.7   727.2   1.34         10.8
ICOL  1.4 % CO
ICOG  0.7 % CO        1972   FTP  3.37   83.9   801.0   2.21          9.4
                      1975   FTP  2.78   70.9   761.4   2.19         10.1
OTHER TESTS:          HOT  START  2.40   65.7   696.9   1.95         11.0
        MODAL         HFET        2.16   78.2   540.5   2.33         13.2


013  73 BUIC RIVI 455 COLD TRANS  8.84  165.3   716.6   1.99          8.8
                      COLD  STAB  4.92  132.0   700.9   0.99          9.6
IHCL  9939PPM CARBON  HOT  TRANS  6.39  126.7   614.3   1.50         10.6
IHCG   520PPM HEXANE  HOT   STAB  5.35  141.1   678.0   0.90          9.7
ICOL  6.6 % CO
ICOG  5.2 % CO        1972   FTP  6.83  148.2   708.6   1.48          9.2
                      1975   FTP  6.15  137.5   680.2   1.34          9.7
OTHER TESTS:          HOT  START  5.86  134.1   647.0   1.19         10.1
        MODAL         HFET        2.62   85.6   503.8   1.21         13.7


014  73 CADI FLEE 472 COLD TRANS  5.67  114.0   928.9   2.53          7.9
                      COLD  STAB  4.28  129.4   902.2   2.02          7.9
IHCL  1462PPM CARBON  HOT  TRANS  5.26  183.6   756.8   1.66          8.4
IHCG   100PPM HEXANE  HOT   STAB  5.74  237.8   796.3   1.00          7.5
ICOL  2.8 % CO
ICOG  1.8 % CO        1972   FTP  4.96  121.9   915.2   2.27          7.9
                      1975   FTP  4.84  141.2   867.5   2.03          8.0
OTHER TESTS:          HOT  START  5.51  211.4   777.1   1.32          7.9
        MODAL         HFET        3.34  127.5   607.0   1.57         10.9


015  73 CAPR SEDA 155 COLD TRANS  4.56   75.5   390.1   3.18         17.0
                      COLD  STAB  3.36   71.9   378.8   1.53         17.7
IHCL  3641PPM CARBON  HOT  TRANS  3.29   47.3   363.2   2.86         19.8
IHCG   270PPM HEXANE  HOT   STAB  3.24   68.4   371.5   1.38         18.1
ICOL  2.9 % CO
ICOG  3.1 % CO        1972   FTP  3.94   73.7   384.3   2.33         17.3
                      1975   FTP  3.59   65.8   376.8   2.24         18.1
OTHER TESTS:          HOT  START  3.26   58.1   367.5   2.10         18.9
        MODAL         HFET        2.15   29.5   296.9   3.36         25.3

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS ON INDIVIDUAL VEHICLES IN DENVER

VEH NO.	YR MAKE MODL CID	TEST	TYPE	-----GRAMS PER MILE----- HC	CO	CO2	NOXC	MPG FUEL ECON
016	73 CHEV VEGA 140	COLD	TRANS	2.79	55.9	378.5	2.49	18.7
		COLD	STAB	1.18	28.4	336.4	1.41	23.1
IHCL	2876PPM CARBON	HOT	TRANS	1.06	23.8	299.5	2.05	26.1
IHCG	460PPM HEXANE	HOT	STAB					
ICOL	3.7 % CO							
ICOG	2.3 % CO	1972	FTP	1.96	41.8	356.9	1.94	20.7
		1975	FTP	1.48	32.9	335.0	1.82	22.7
OTHER TESTS:		HOT	START					
MODAL,EVAP		HFET		0.63	14.7	275.0	1.81	29.6
016R	73 CHEV VEGA 140	COLD	TRANS	2.42	63.4	430.4	2.72	16.5
		COLD	STAB	1.36	33.0	351.1	1.51	21.8
IHCL	2876PPM CARBON	HOT	TRANS	1.29	23.1	320.0	2.10	24.6
IHCG	460PPM HEXANE	HOT	STAB					
ICOL	3.7 % CO							
ICOG	2.3 % CO	1972	FTP	1.87	47.8	389.7	2.10	18.9
		1975	FTP	1.56	36.6	359.1	1.93	21.1
OTHER TESTS:		HOT	START					
MODAL,EVAP		HFET		0.63	14.7	275.0	1.81	29.6
017	73 CHEV NOVA 250	COLD	TRANS	7.00	133.8	419.7	0.75	13.6
		COLD	STAB	2.64	52.2	476.2	0.98	15.7
IHCL	446PPM CARBON	HOT	TRANS	4.38	61.3	368.3	1.30	18.5
IHCG	45PPM HEXANE	HOT	STAB					
ICOL	1.0 % CO							
ICOG	0.5 % CO	1972	FTP	4.76	91.9	448.7	0.87	14.6
		1975	FTP	4.03	71.8	434.4	1.02	15.8
OTHER TESTS:		HOT	START					
MODAL,EVAP		HFET		2.47	19.9	318.0	2.35	24.9
017R	73 CHEV NOVA 250	COLD	TRANS	7.44	139.7	429.8	0.74	13.2
		COLD	STAB	2.36	42.6	462.0	1.11	16.5
IHCL	446PPM CARBON	HOT	TRANS	5.32	58.5	379.6	1.58	18.2
IHCG	45PPM HEXANE	HOT	STAB					
ICOL	1.0 % CO							
ICOG	0.5 % CO	1972	FTP	4.83	89.8	446.3	0.93	14.7
		1975	FTP	4.24	67.3	432.4	1.17	16.1
OTHER TESTS:		HOT	START					
MODAL,EVAP		HFET		2.47	19.9	318.0	2.35	24.9

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS ON INDIVIDUAL VEHICLES IN DENVER

```
                                                                  MPG
VEH                                  -----GRAMS PER MILE-----    FUEL
NO.  YR MAKE MODL CID TEST  TYPE    HC     CO     CO2    NOXC    FCON
-----------------------------------------------------------------------
018  73 CHEV NOVA 307 COLD TRANS 10.53 177.2  520.2   1.57   10.7
                      COLD  STAB  5.24 103.7  560.4   1.37   12.0
IHCL  5352PPM CARBON  HOT  TRANS  6.28 134.1  468.7   1.64   12.7
IHCG   600PPM HEXANE  HOT   STAB  7.87 146.1  529.5   0.75   11.3
ICOL  5.1 % CO
ICOG  7.5 % CO        1972   FTP  7.81 139.4  540.8   1.47   11.3
                      1975   FTP  6.63 127.5  526.6   1.49   11.9
OTHER TESTS:          HOT  START  7.09 140.2  499.9   1.18   11.9
       MODAL          HFET        4.11 105.2  394.4   1.11   15.5


019  73 CHEV NOVA 307 COLD TRANS 12.22 202.4  493.6   1.22   10.4
                      COLD  STAB  6.68 125.6  528.8   1.10   11.9
IHCL  9939PPM CARBON  HOT  TRANS  5.90 125.3  468.3   1.40   13.0
IHCG   720PPM HEXANE  HOT   STAB  6.51 130.3  517.7   0.87   11.9
ICOL  5.6 % CO
ICOG  8.0 % CO        1972   FTP  9.38 163.0  511.7   1.16   11.1
                      1975   FTP  7.62 141.6  504.7   1.21   11.8
OTHER TESTS:          HOT  START  6.22 127.9  493.7   1.13   12.4
       MODAL          HFET        4.59 112.5  363.6   0.98   16.0


020  73 CHEV MALI 350 COLD TRANS  7.40 146.3  605.3   0.86   10.3
                      COLD  STAB  3.77  86.2  626.6   0.90   11.5
IHCL  1223PPM CARBON  HOT  TRANS  4.08 103.0  527.2   0.93   12.6
IHCG   380PPM HEXANE  HOT   STAB
ICOL  1.8 % CO
ICOG  1.5 % CO        1972   FTP  5.54 115.5  616.2   0.88   10.9
                      1975   FTP  4.62 103.4  594.6   0.90   11.5
OTHER TESTS:          HOT  START
   MODAL,EVAP         HFET        4.00 141.6  404.8   0.33   13.9


020R 73 CHEV MALI 350 COLD TRANS  9.71 163.0  605.3   0.93    9.9
                      COLD  STAB  4.01  98.6  623.2   0.82   11.2
IHCL  1223PPM CARBON  HOT  TRANS  4.40 105.8  534.0   1.05   12.4
IHCG   380PPM HEXANE  HOT   STAB
ICOL  1.8 % CO
ICOG  1.5 % CO        1972   FTP  6.78 130.0  614.5   0.88   10.6
                      1975   FTP  5.31 114.1  594.7   0.91   11.2
OTHER TESTS:          HOT  START
   MODAL,EVAP         HFET        4.00 141.6  404.8   0.33   13.9

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN DENVER

```
VEH                                                                MPG
                                        -----GRAMS PER MILE-----   FUEL
NO.  YR MAKE MODL CID TEST   TYPE     HC     CO     CO2    NOXC    ECON
------------------------------------------------------------------------
021  73 CHEV MALI 350 COLD  TRANS   7.10  122.8   597.6   1.87    10.9
                      COLD   STAB   4.40   79.5   559.6   1.26    12.7
IHCL  2494PPM CARBON  HOT   TRANS   4.77   92.2   500.0   1.51    13.4
IHCG   350PPM HEXANE  HOT    STAB
ICOL  1.2 % CO
ICOG  1.3 % CO        1972    FTP   5.72  100.6   578.1   1.56    11.8
                      1975    FTP   5.07   92.1   551.0   1.46    12.5
OTHER TESTS:          HOT   START
   MODAL,EVAP         HFET          2.48   40.5   415.2   1.77    18.2


021R 73 CHEV MALI 350 COLD  TRANS   5.83  103.1   555.6   1.74    12.1
                      COLD   STAB   3.93   66.0   519.7   1.38    14.0
IHCL  2494PPM CARBON  HOT   TRANS   4.21   80.4   484.6   1.64    14.2
IHCG   350PPM HEXANE  HOT    STAB
ICOL  1.2 % CO
ICOG  1.3 % CO        1972    FTP   4.85   84.1   537.2   1.56    13.0
                      1975    FTP   4.40   77.8   517.5   1.53    13.6
OTHER TESTS:          HOT   START
   MODAL,EVAP         HFET          2.48   40.5   415.2   1.77    18.2


022  73 CHEV MONT 350 COLD  TRANS   8.14  187.0   589.0   0.67     9.8
                      COLD   STAB   2.88  119.3   632.9   0.47    10.7
IHCL  1413PPM CARBON  HOT   TRANS   2.78   49.4   579.2   2.14    13.3
IHCG   130PPM HEXANE  HOT    STAB   2.42   67.3   654.0   1.09    11.6
ICOL  2.1 % CO
ICOG  2.0 % CO        1972    FTP   5.44  152.2   611.5   0.57    10.2
                      1975    FTP   3.96  114.1   608.8   0.98    11.1
OTHER TESTS:          HOT   START   2.60   58.6   617.6   1.60    12.4
         MODAL        HFET          1.06   35.5   447.2   1.43    17.5


023  73 CHEV CAPR 400 COLD  TRANS   5.06  125.3   718.3   1.85     9.5
                      COLD   STAB   3.26   80.5   689.1   1.50    10.7
IHCL  1985PPM CARBON  HOT   TRANS   3.06   81.0   592.4   2.04    12.2
IHCG   204PPM HEXANE  HOT    STAB
ICOL  1.9 % CO
ICOG  1.9 % CO        1972    FTP   4.14  102.3   703.3   1.67    10.1
                      1975    FTP   3.58   90.0   668.4   1.72    10.8
OTHER TESTS:          HOT   START
   MODAL,EVAP         HFET          1.31   31.8   498.6   8.55    16.1

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN DENVER

```
                                                                  MPG
VEH                                 -----GRAMS PER MILE-----     FUEL
NO.  YR MAKE MODL CID TEST  TYPE    HC    CO     CO2    NOXC    ECON
--------------------------------------------------------------------
023R 73 CHEV CAPR 400 COLD TRANS  4.01 112.6   665.3   2.53    10.4
                      COLD  STAB  2.61  65.7   601.1   1.91    12.5
IHCL  1985PPM CARBON  HOT  TRANS  2.82  77.3   565.7   3.12    12.8
IHCG   204PPM HEXANE  HOT   STAB
ICOL  1.9 % CO
ICOG  1.9 % CO        1972   FTP  3.29  88.5   632.3   2.21    11.4
                      1975   FTP  2.96  78.7   604.7   2.38    12.0
OTHER TESTS:          HOT  START
   MODAL,EVAP         HFET        1.31  31.8   498.6   8.55    16.1


024  73 CHRY NEWP 400 COLD TRANS  8.87 172.4   711.9   3.14     8.8
                      COLD  STAB  7.63 189.9   666.1   1.63     9.0
IHCL  9939PPM CARBON  HOT  TRANS  6.59 162.2   587.8   2.13    10.3
IHCG   450PPM HEXANE  HOT   STAB  8.06 212.7   633.4   1.26     8.9
ICOL  6.6 % CO
ICOG  8.8 % CO        1972   FTP  8.24 181.4   688.3   2.36     8.9
                      1975   FTP  7.61 178.5   653.9   2.08     9.3
OTHER TESTS:          HOT  START  7.35 188.1   611.2   1.68     9.5
         MODAL        HFET        4.84 117.2   515.3   1.68    12.4


025  73 DATS 1200  71 COLD TRANS  3.63  58.7   259.4   1.35    24.4
                      COLD  STAB  2.20  43.1   296.3   0.97    23.9
IHCL  4825PPM CARBON  HOT  TRANS  4.25  43.7   245.4   1.47    27.1
IHCG   190PPM HEXANE  HOT   STAB  2.98  48.3   287.0   0.94    23.8
ICOL  5.3 % CO
ICOG  3.2 % CO        1972   FTP  2.89  50.7   278.3   1.15    24.2
                      1975   FTP  3.07  46.5   274.4   1.19    24.8
OTHER TESTS:          HOT  START  3.60  46.1   266.8   1.20    25.3
         MODAL        HFET        1.20  24.1   203.4   2.22    36.2


026  73 DODG DART 225 COLD TRANS  6.51 157.9   350.1   2.31    14.3
                      COLD  STAB  4.43 103.6   348.0   1.26    16.9
IHCL  3859PPM CARBON  HOT  TRANS  4.53 109.5   325.2   1.41    17.3
IHCG   390PPM HEXANE  HOT   STAB
ICOL  5.1 % CO
ICOG  5.2 % CO        1972   FTP  5.44 130.0   349.0   1.77    15.6
                      1975   FTP  4.89 116.6   342.1   1.52    16.4
OTHER TESTS:          HOT  START
   MODAL,EVAP         HFET        2.71  62.0   279.9   2.11    23.0

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESU
ON INDIVIDUAL VEHICLES IN DENVER

```
                                                                  MPG
VEH                                     -----GRAMS PER MILE-----  FUEL
NO.  YR MAKE MODL CID TEST  TYPE    HC     CO     CO2    NOXC   ECON
---------------------------------------------------------------------
026R 73 DODG DART 225 COLD TRANS  7.01  162.1  331.9   1.79   14.6
                      COLD  STAB  4.27  106.1  333.7   1.17   17.3
IHCL  3859PPM CARBON  HOT  TRANS  4.21  106.3  310.5   1.30   18.1
IHCG   390PPM HEXANE  HOT   STAB
ICOL  5.1 % CO
ICOG  5.2 % CO        1972   FTP  5.60  133.3  332.8   1.47   15.8
                      1975   FTP  4.82  117.9  326.9   1.33   16.8
OTHER TESTS:          HOT  START
   MODAL,EVAP         HFET        2.71   62.0  279.9   2.11   23.0


027  73 DODG CHAR 318 COLD TRANS  6.81  127.9  661.5   1.86   10.0
                      COLD  STAB  5.17  147.1  614.6   1.08   10.3
IHCL  3382PPM CARBON  HOT  TRANS  5.25  127.1  560.3   1.63   11.4
IHCG   160PPM HEXANE  HOT   STAB  4.66  128.8  615.9   1.33   10.7
ICOL  5.1 % CO
ICOG  4.2 % CO        1972   FTP  5.97  137.7  637.4   1.46   10.2
                      1975   FTP  5.53  137.5  609.4   1.40   10.5
OTHER TESTS:          HOT  START  4.94  128.0  588.9   1.47   11.0
         MODAL        HFET        4.02  104.0  432.6   1.78   14.6


028  73 FORD PINT  97 COLD TRANS  5.40   66.2  224.1   2.22   25.7
                      COLD  STAB  3.95   67.6  254.5   2.07   23.8
IHCL  3765PPM CARBON  HOT  TRANS  3.35   48.2  225.2   2.82   28.5
IHCG   410PPM HEXANE  HOT   STAB
ICOL  4.8 % CO
ICOG  5.4 % CO        1972   FTP  4.66   66.9  239.7   2.14   24.7
                      1975   FTP  4.09   61.9  240.0   2.31   25.3
OTHER TESTS:          HOT  START
   MODAL,EVAP         HFET        1.40   17.3  214.6   3.68   36.0


028R 73 FORD PINT  97 COLD TRANS  5.85   73.4  241.4   2.49   23.7
                      COLD  STAB  3.05   53.0  221.1   1.86   28.3
IHCL  3765PPM CARBON  HOT  TRANS  3.26   46.3  230.5   2.88   28.3
IHCG   410PPM HEXANE  HOT   STAB
ICOL  4.8 % CO
ICOG  5.4 % CO        1972   FTP  4.41   62.9  230.9   2.17   25.8
                      1975   FTP  3.69   55.4  227.9   2.28   27.2
OTHER TESTS:          HOT  START
   MODAL,EVAP         HFET        1.40   17.3  214.6   3.68   36.0

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN DENVER

```
                                                                 MPG
VEH                                   -----GRAMS PER MILE-----   FUEL
NO.  YR MAKE MODL CID TEST  TYPE    HC    CO     CO2    NOXC    ECON
----------------------------------------------------------------------
029   73 FORD MAVE 250 COLD TRANS  6.00 113.9   454.0   2.10    13.6
                       COLD  STAB  4.78 124.9   452.9   1.01    13.4
IHCL  3183PPM CARBON   HOT  TRANS  5.57 116.5   390.5   1.34    15.0
IHCG   240PPM HEXANE   HOT   STAB  4.78 137.1   418.2   0.81    13.7
ICOL  4.2 % CO
ICOG  3.4 % CO         1972   FTP  5.37 119.6   453.4   1.54    13.5
                       1975   FTP  5.25 120.3   435.8   1.33    13.8
OTHER TESTS:           HOT  START  5.16 127.1   404.7   1.07    14.3
         MODAL         HFET        4.01  93.1   303.8   1.22    19.2


030   73 FORD MAVE 302 COLD TRANS  6.09  77.0   555.8   1.44    12.7
                       COLD  STAB  4.83  62.3   491.2   1.18    14.7
IHCL  2823PPM CARBON   HOT  TRANS  4.66  49.8   464.9   1.34    15.9
IHCG   115PPM HEXANE   HOT   STAB  4.78  61.3   471.0   1.12    15.2
ICOL  0.3 % CO
ICOG  0.3 % CO         1972   FTP  5.44  69.5   522.6   1.30    13.7
                       1975   FTP  5.04  61.9   497.4   1.28    14.5
OTHER TESTS:           HOT  START  4.72  55.7   468.0   1.23    15.6
         MODAL         HFET        3.23  34.7   423.5   1.42    18.2


031   73 FORD TORI 351 COLD TRANS  4.70  96.6   681.6   1.95    10.5
                       COLD  STAB  4.52  57.2   720.8   2.07    10.8
IHCL  2773PPM CARBON   HOT  TRANS  3.64  60.5   604.4   2.23    12.5
IHCG   280PPM HEXANE   HOT   STAB
ICOL  1.7 % CO
ICOG  1.6 % CO         1972   FTP  4.60  76.3   701.7   2.01    10.6
                       1975   FTP  4.31  66.3   680.3   2.09    11.1
OTHER TESTS:           HOT  START
   MODAL,EVAP          HFET        2.62  37.3   416.6   2.16    18.4


031R 73 FORD TORI 351  COLD TRANS  5.03  98.1   679.1   1.78    10.5
                       COLD  STAB  4.69  63.1   714.7   1.86    10.7
IHCL  2773PPM CARBON   HOT  TRANS  3.99  67.8   603.8   1.88    12.3
IHCG   280PPM HEXANE   HOT   STAB
ICOL  1.7 % CO
ICOG  1.6 % CO         1972   FTP  4.85  80.2   697.3   1.82    10.6
                       1975   FTP  4.56  71.8   676.5   1.85    11.0
OTHER TESTS:           HOT  START
   MODAL,EVAP          HFET        2.62  37.3   416.6   2.16    18.4

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN DENVER

```
                                                                    MPG
                                         -----GRAMS PER MILE-----   FUEL
VEH
NO.  YR MAKE MODL CID TEST  TYPE    HC     CO     CO2    NOXC  ECON
-----------------------------------------------------------------------
032   73 FORD TORI 351 COLD TRANS  6.57  114.2   568.6   2.21   11.5
                       COLD  STAB  4.99   79.4   574.4   1.75   12.4
IHCL  3153PPM CARBON   HOT  TRANS  5.01   86.3   514.3   2.06   13.3
IHCG   380PPM HEXANE   HOT   STAB
ICOL  1.6 % CO
ICOG  2.2 % CO         1972   FTP  5.76   96.4   571.6   1.97   12.0
                       1975   FTP  5.33   88.6   556.5   1.93   12.5
OTHER TESTS:           HOT  START
   MODAL,EVAP          HFET        3.69   59.3   356.0   2.39   19.3


032R 73 FORD TORI 351  COLD TRANS  6.55   98.2   525.1   2.04   12.7
                       COLD  STAB  4.51   49.8   466.9   1.45   15.9
IHCL  3153PPM CARBON   HOT  TRANS  4.58   47.1   431.9   2.25   17.1
IHCG   380PPM HEXANE   HOT   STAB
ICOL  1.6 % CO
ICOG  2.2 % CO         1972   FTP  5.50   73.3   495.2   1.74   14.1
                       1975   FTP  4.95   59.2   469.4   1.79   15.4
OTHER TESTS:           HOT  START
   MODAL,EVAP          HFET        3.69   59.3   356.0   2.39   19.3


033   73 FORD STAW 400 COLD TRANS  5.52  136.9   746.0   1.87    9.1
                       COLD  STAB  3.96   61.8   764.0   1.59   10.2
IHCL  2160PPM CARBON   HOT  TRANS  3.97   75.6   629.7   1.79   11.7
IHCG   240PPM HEXANE   HOT   STAB
ICOL  0.5 % CO
ICOG  0.4 % CO         1972   FTP  4.72   98.4   755.2   1.73    9.6
                       1975   FTP  4.29   81.3   723.0   1.70   10.3
OTHER TESTS:           HOT  START
   MODAL,EVAP          HFET        2.65   37.8   484.5   1.99   16.1


033R 73 FORD STAW 400  COLD TRANS  5.20  120.7   754.1   2.06    9.2
                       COLD  STAB  3.90   56.0   784.7   1.66   10.0
IHCL  2160PPM CARBON   HOT  TRANS  4.24   76.5   645.5   1.87   11.4
IHCG   240PPM HEXANE   HOT   STAB
ICOL  0.5 % CO
ICOG  0.4 % CO         1972   FTP  4.53   87.5   769.8   1.85    9.6
                       1975   FTP  4.27   75.2   739.7   1.80   10.2
OTHER TESTS:           HOT  START
   MODAL,EVAP          HFET        2.65   37.8   484.5   1.99   16.1

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN DENVER

```
                                                                   MPG
VEH                                    -----GRAMS PER MILE-----   FUEL
NO.  YR MAKE MODL CID TEST  TYPE    HC     CO     CO2    NOXC    ECON
-----------------------------------------------------------------------
034   73 FORD LTD  400 COLD TRANS  4.09  104.3   746.7   1.62     9.6
                       COLD  STAB  2.89   38.5   693.0   1.41    11.6
IHCL  3106PPM CARBON   HOT  TRANS  3.18   65.0   607.1   1.43    12.3
IHCG   360PPM HEXANE   HOT   STAB
ICOL  4.2 % CO
ICOG  4.2 % CO         1972   FTP  3.47   70.5   719.1   1.51    10.6
                       1975   FTP  3.22   59.6   680.4   1.46    11.3
OTHER TESTS:           HOT  START
   MODAL,EVAP          HFET        2.16   46.5   484.3   1.67    15.7


034R 73 FORD LTD  400  COLD TRANS  4.29   99.0   742.2   1.75     9.7
                       COLD  STAB  3.11   60.9   678.1   1.37    11.3
IHCL  3106PPM CARBON   HOT  TRANS  3.12   77.5   659.3   1.34    11.2
IHCG   360PPM HEXANE   HOT   STAB
ICOL  4.2 % CO
ICOG  4.2 % CO         1972   FTP  3.68   79.4   709.3   1.55    10.5
                       1975   FTP  3.36   73.5   686.3   1.44    10.9
OTHER TESTS:           HOT  START
   MODAL,EVAP          HFET        2.16   46.5   484.3   1.67    15.7


035   73 MAZD RX2   70 COLD TRANS  6.81   48.2   452.6   0.71    16.1
                       COLD  STAB  2.23   24.1   568.4   0.60    14.5
IHCL  1080PPM CARBON   HOT  TRANS  8.59   55.5   341.4   0.84    19.5
IHCG    70PPM HEXANE   HOT   STAB
ICOL  3.4 % CO
ICOG  1.7 % CO         1972   FTP  4.46   35.8   512.0   0.65    15.2
                       1975   FTP  4.95   37.8   481.2   0.69    16.0
OTHER TESTS:           HOT  START
   MODAL,EVAP          HFET        1.64   17.4   348.0   0.94    23.3


035R 73 MAZD RX2   70  COLD TRANS  8.30   53.7   478.9   0.96    15.1
                       COLD  STAB  3.16   33.0   559.0   0.69    14.3
IHCL  1080PPM CARBON   HOT  TRANS  9.41   63.6   373.9   0.81    17.6
IHCG    70PPM HEXANE   HOT   STAB
ICOL  3.4 % CO
ICOG  1.7 % CO         1972   FTP  5.66   43.1   520.0   0.82    14.7
                       1975   FTP  5.97   45.8   490.9   0.78    15.3
OTHER TESTS:           HOT  START
   MODAL,EVAP          HFET        1.64   17.4   348.0   0.94    23.3

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

```
              LISTING OF FEDERAL TEST PROCEDURE RESULTS
                  ON INDIVIDUAL VEHICLES IN DENVER

                                                                   MPG
VEH                                     -----GRAMS PER MILE-----   FUEL
NO.   YR MAKE MODL CID TEST   TYPE    HC     CO     CO2    NOXC   ECON
----------------------------------------------------------------------
036   73 MERC BROU 429 COLD TRANS  10.01  146.6   579.0   1.69   10.6
                       COLD  STAB  12.75  184.0   481.1   0.83   10.9
IHCL   9403PPM CARBON  HOT  TRANS   8.31  131.8   491.8   1.26   12.2
IHCG    660PPM HEXANE  HOT   STAB
ICOL   5.1 % CO
ICOG   5.2 % CO        1972   FTP  11.41  165.8   528.7   1.24   10.8
                       1975   FTP  10.94  161.7   504.5   1.13   11.2
OTHER TESTS:           HOT  START
   MODAL,EVAP          HFET          4.03   71.4   387.9   1.26   17.3


036R 73 MERC BROU 429  COLD TRANS   9.37  121.1   580.9   1.98   11.1
                       COLD  STAB  11.55  171.0   496.6   0.83   11.1
IHCL   9403PPM CARBON  HOT  TRANS   8.26  117.7   462.8   1.26   13.2
IHCG    660PPM HEXANE  HOT   STAB
ICOL   5.1 % CO
ICOG   5.2 % CO        1972   FTP  10.49  146.7   537.6   1.39   11.1
                       1975   FTP  10.18  145.8   504.8   1.19   11.6
OTHER TESTS:           HOT  START
   MODAL,EVAP          HFET          4.03   71.4   387.9   1.26   17.3


037   73 OLDS CUTL 350 COLD TRANS   3.92   54.2   561.3   2.69   13.5
                       COLD  STAB   2.84   22.1   497.5   1.98   16.4
IHCL   2823PPM CARBON  HOT  TRANS   3.42   30.6   464.8   2.60   16.9
IHCG    380PPM HEXANE  HOT   STAB
ICOL   0.2 % CO
ICOG   0.3 % CO        1972   FTP   3.36   37.7   528.5   2.33   14.8
                       1975   FTP   3.22   31.2   501.8   2.30   15.8
OTHER TESTS:           HOT  START
   MODAL,EVAP          HFET          1.74    9.6   340.5   2.65   24.6


037R 73 OLDS CUTL 350  COLD TRANS   3.51   45.8   498.6   2.98   15.3
                       COLD  STAB   2.40   20.0   412.7   2.09   19.6
IHCL   2823PPM CARBON  HOT  TRANS   3.49   39.8   456.1   3.24   16.8
IHCG    380PPM HEXANE  HOT   STAB
ICOL   0.2 % CO
ICOG   0.3 % CO        1972   FTP   2.94   32.5   454.5   2.52   17.2
                       1975   FTP   2.93   30.9   442.7   2.59   17.7
OTHER TESTS:           HOT  START
   MODAL,EVAP          HFET          1.74    9.6   340.5   2.65   24.6

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN DENVER

```
VEH                                                                  MPG
                                      -----GRAMS PER MILE-----       FUEL
NO.  YR MAKE MODL CID TEST   TYPE     HC     CO      CO2    NOXC     ECON
-------------------------------------------------------------------------
038   73 OLDS CUTL 455 COLD  TRANS   3.40   70.8    843.5   2.96      9.2
                       COLD   STAB   1.80   26.2    829.8   2.33     10.1
IHCL   2102PPM CARBON  HOT   TRANS   1.82   20.2    732.1   2.84     11.5
IHCG    140PPM HEXANE  HOT    STAB
ICOL  1.5 % CO
ICOG  0.8 % CO          1972   FTP   2.58   47.9    836.5   2.64      9.6
                        1975   FTP   2.14   33.9    805.6   2.60     10.3
OTHER TESTS:           HOT   START
   MODAL,EVAP          HFET          0.86    9.6    602.0   2.73     14.3


038R 73 OLDS CUTL 455  COLD  TRANS   2.74   55.4    810.6   3.00      9.8
                       COLD   STAB   1.89   26.5    798.3   2.28     10.5
IHCL   2102PPM CARBON  HOT   TRANS   1.81   20.5    690.8   2.80     12.2
IHCG    140PPM HEXANE  HOT    STAB
ICOL  1.5 % CO
ICOG  0.8 % CO          1972   FTP   2.30   40.6    804.3   2.63     10.1
                        1975   FTP   2.04   30.9    771.1   2.58     10.7
OTHER TESTS:           HOT   START
   MODAL,EVAP          HFET          0.86    9.6    602.0   2.73     14.3


039   73 PLYM VALI 318 COLD  TRANS   6.51   99.1    514.9   2.74     12.8
                       COLD   STAB   4.18   49.9    464.5   1.92     16.0
IHCL   3482PPM CARBON  HOT   TRANS   4.24   46.0    425.1   3.15     17.4
IHCG    380PPM HEXANE  HOT    STAB
ICOL  3.2 % CO
ICOG  3.4 % CO          1972   FTP   5.32   73.9    489.0   2.32     14.3
                        1975   FTP   4.69   59.1    464.1   2.43     15.5
OTHER TESTS:           HOT   START
   MODAL,EVAP          HFET          3.68   36.9    388.5   3.86     19.4


039R 73 PLYM VALI 318  COLD  TRANS   6.26   84.8    514.0   2.98     13.3
                       COLD   STAB   3.97   47.8    466.9   2.05     16.0
IHCL   3482PPM CARBON  HOT   TRANS   4.02   43.7    429.3   3.21     17.4
IHCG    380PPM HEXANE  HOT    STAB
ICOL  3.2 % CO
ICOG  3.4 % CO          1972   FTP   5.08   65.8    489.8   2.50     14.6
                        1975   FTP   4.47   54.4    466.3   2.57     15.7
OTHER TESTS:           HOT   START
   MODAL,EVAP          HFET          3.68   36.9    388.5   3.86     19.4

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN DENVER

```
                                                                      MPG
VEH                                         -----GRAMS PER MILE-----  FUEL
NO.  YR MAKE MODL CID TEST   TYPE    HC     CO     CO2    NOXC  ECON
-------------------------------------------------------------------------
040  73 PLYM FURY 360 COLD TRANS   5.40 130.3   662.0   3.64   10.0
                      COLD  STAB   4.50 125.0   622.0   2.36   10.7
IHCL  3059PPM CARBON  HOT  TRANS   4.03  93.6   546.4   3.63   12.6
IHCG   250PPM HEXANE  HOT   STAB
ICOL  5.1 % CO
ICOG  6.0 % CO        1972   FTP   4.94 127.6   641.5   2.98   10.3
                      1975   FTP   4.56 117.4   609.4   2.98   11.0
OTHER TESTS:          HOT  START
   MODAL,EVAP         HFET         2.73  34.5   468.2   4.79   16.7


040R 73 PLYM FURY 360 COLD TRANS   5.35 123.8   675.4   3.62   10.0
                      COLD  STAB   4.31 114.1   635.7   2.43   10.7
IHCL  3059PPM CARBON  HOT  TRANS   3.97  85.6   557.5   3.68   12.6
IHCG   250PPM HEXANE  HOT   STAB
ICOL  5.1 % CO
ICOG  6.0 % CO        1972   FTP   4.82 118.8   655.0   3.01   10.4
                      1975   FTP   4.43 108.2   622.3   3.03   11.0
OTHER TESTS:          HOT  START
   MODAL,EVAP         HFET         2.73  34.5   468.2   4.79   16.7


041  73 PONT LEMA 350 COLD TRANS   6.44  96.7   718.1   3.27   10.0
                      COLD  STAB   5.15 100.6   698.2   2.63   10.2
IHCL  9939PPM CARBON  HOT  TRANS   5.97  87.1   563.3   4.36   12.3
IHCG   600PPM HEXANE  HOT   STAB   7.10 135.5   597.7   3.08   10.7
ICOL  6.6 % CO
ICOG  8.6 % CO        1972   FTP   5.78  98.7   707.9   2.94   10.1
                      1975   FTP   5.65  96.1   664.9   3.24   10.6
OTHER TESTS:          HOT  START   6.55 112.0   581.0   3.71   11.4
         MODAL        HFET         4.15  76.9   453.9   2.99   15.1


042  73 PONT CATA 400 COLD TRANS   5.42  68.0   675.8   6.71   11.1
                      COLD  STAB   3.84  28.3   671.5   3.72   12.2
IHCL  1270PPM CARBON  HOT  TRANS   3.59  24.5   571.4   4.76   14.3
IHCG   310PPM HEXANE  HOT   STAB
ICOL  2.8 % CO
ICOG  2.9 % CO        1972   FTP   4.61  47.7   673.6   5.18   11.6
                      1975   FTP   4.10  35.6   644.6   4.64   12.4
OTHER TESTS:          HOT  START
   MODAL,EVAP         HFET         2.46  11.2   465.4   5.50   18.1

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS ON INDIVIDUAL VEHICLES IN DENVER

```
                                                                       MPG
VEH                                ------GRAMS PER MILE-----          FUEL
NO.  YR MAKE MODL CID TEST  TYPE     HC     CO     CO2    NOXC        ECON
--------------------------------------------------------------------------
042R 73 PONT CATA 400 COLD TRANS   5.38   65.8   682.4   7.13   11.1
                      COLD  STAB   3.83   28.1   657.0   3.81   12.4
IHCL  1270PPM CARBON  HOT   TRANS  3.64   25.4   575.0   5.21   14.2
IHCG   310PPM HEXANE  HOT   STAB
ICOL  2.8 % CO
ICOG  2.9 % CO         1972   FTP  4.59   46.4   669.4   5.43   11.7
                       1975   FTP  4.10   35.2   639.6   4.89   12.5
OTHER TESTS:          HOT  START
   MODAL,EVAP         HFET         2.46   11.2   465.4   5.50   18.1


043  73 TOYO CORO 120 COLD TRANS   4.36   72.6   458.8   3.85   15.1
                      COLD  STAB   3.22   52.9   410.1   2.30   17.6
IHCL  2785PPM CARBON  HOT   TRANS  2.97   41.3   393.9   3.87   19.0
IHCG   350PPM HEXANE  HOT   STAB   3.56   64.9   384.8   2.01   17.8
ICOL  1.1 % CO
ICOG  2.3 % CO         1972   FTP  3.78   62.5   433.8   3.06   16.3
                       1975   FTP  3.39   53.8   415.8   3.06   17.4
OTHER TESTS:          HOT  START   3.27   53.4   389.2   2.92   18.4
         MODAL        HFET         2.22   27.9   328.4   4.47   23.4


044  73 VOLK SEDA  97 COLD TRANS   4.00   77.8   248.5   2.40   23.1
                      COLD  STAB   2.39   58.4   225.8   1.77   27.3
IHCL  2744PPM CARBON  HOT   TRANS  2.44   54.9   224.1   2.26   27.9
IHCG   280PPM HEXANE  HOT   STAB
ICOL  3.4 % CO
ICOG  3.4 % CO         1972   FTP  3.18   67.8   236.8   2.08   25.1
                       1975   FTP  2.74   61.5   230.1   2.04   26.5
OTHER TESTS:          HOT  START
   MODAL,EVAP         HFET         1.29   32.1   211.3   2.90   33.4


044R 73 VOLK SEDA  97 COLD TRANS   4.29   86.9   260.8   2.32   21.6
                      COLD  STAB   2.62   69.8   237.7   1.64   25.0
IHCL  2744PPM CARBON  HOT   TRANS  2.49   67.2   221.2   1.68   26.5
IHCG   280PPM HEXANE  HOT   STAB
ICOL  3.4 % CO
ICOG  3.4 % CO         1972   FTP  3.43   78.2   248.9   1.97   23.2
                       1975   FTP  2.93   72.7   237.9   1.79   24.6
OTHER TESTS:          HOT  START
   MODAL,EVAP         HFET         1.29   32.1   211.3   2.90   33.4

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN DENVER

```
                                                                    MPG
VEH                                 -----GRAMS PER MILE-----       FUEL
NO.  YR MAKE MODL CID TEST  TYPE    HC      CO     CO2    NOXC     ECON
-----------------------------------------------------------------------
045  73 VOLK STAW 103 COLD TRANS   5.46   41.5   410.7   3.90     18.0
                      COLD  STAB   2.66   49.1   376.3   2.44     19.2
IHCL  3183PPM CARBON  HOT  TRANS   3.80   51.8   333.3   3.09     20.8
IHCG   100PPM HEXANE  HOT   STAB   2.80   56.4   356.4   2.22     19.6
ICOL  5.6 % CO
ICOG  3.2 % CO        1972   FTP   4.03   45.4   393.1   3.15     18.6
                      1975   FTP   3.57   48.3   371.6   2.93     19.3
OTHER TESTS:          HOT  START   3.29   54.1   345.2   2.64     20.1
        MODAL         HFET         1.67   21.1   284.0   3.40     27.5


046  72 BUIC SKYL 350 COLD TRANS   6.80  147.7   534.2   1.79     11.3
                      COLD  STAB   4.14  111.0   548.4   1.49     12.1
IHCL  7561PPM CARBON  HOT  TRANS   4.61  108.2   489.2   2.08     13.2
IHCG   280PPM HEXANE  HOT   STAB   4.62  128.5   546.1   1.27     11.6
ICOL  5.6 % CO
ICOG  4.6 % CO        1972   FTP   5.43  128.8   541.5   1.64     11.7
                      1975   FTP   4.82  117.9   529.0   1.71     12.2
OTHER TESTS:          HOT  START   4.61  118.6   518.4   1.66     12.3
        MODAL         HFET         2.99   71.3   398.7   2.44     17.1


047  72 BUIC CENT 455 COLD TRANS   5.12   98.8   902.7   7.20      8.3
                      COLD  STAB   3.07   41.8   925.2   5.02      8.9
IHCL  2195PPM CARBON  HOT  TRANS   4.17   85.2   717.3   5.40     10.3
IHCG   270PPM HEXANE  HOT   STAB   3.60   72.3   862.0   3.35      9.0
ICOL  5.4 % CO
ICOG  4.0 % CO        1972   FTP   4.07   69.5   914.3   6.08      8.6
                      1975   FTP   3.81   65.8   862.8   5.58      9.1
OTHER TESTS:          HOT  START   3.88   78.6   791.6   4.35      9.6
        MODAL         HFET         2.22   61.2   577.5   4.46     13.0


048  72 CHEV VEGA 140 COLD TRANS   3.67   76.5   315.1   1.53     19.9
                      COLD  STAB   2.55   62.0   377.1   0.86     18.4
IHCL  3910PPM CARBON  HOT  TRANS   2.31   50.6   304.0   1.39     22.7
IHCG   220PPM HEXANE  HOT   STAB   2.82   68.9   361.4   0.76     18.5
ICOL  4.1 % CO
ICOG  3.7 % CO        1972   FTP   3.10   69.1   346.9   1.19     19.1
                      1975   FTP   2.72   61.9   343.8   1.15     19.7
OTHER TESTS:          HOT  START   2.57   60.0   333.5   1.07     20.4
        MODAL         HFET         1.10   36.3   216.5   1.30     32.0

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN DENVER

```
                                                                 MPG
VEH                                  -----GRAMS PER MILE-----   FUEL
NO.   YR MAKE MODL CID TEST  TYPE     HC     CO    CO2   NOXC   ECON
--------------------------------------------------------------------
049   72 CHEV NOVA 250 COLD TRANS   3.76   52.7   475.1   3.46   15.6
                       COLD  STAB   2.68   43.2   467.4   1.53   16.3
IHCL  2387PPM CARBON   HOT  TRANS   3.38   41.4   387.7   3.08   19.1
IHCG   120PPM HEXANE   HOT   STAB   3.20   59.3   461.6   1.21   15.7
ICOL  2.9 % CO
ICOG  2.7 % CO         1972   FTP   3.20   47.8   471.1   2.47   16.0
                       1975   FTP   3.10   44.7   446.9   2.37   16.8
OTHER TESTS:           HOT  START   3.29   50.6   425.6   2.12   17.2
        MODAL          HFET         1.85   37.0   352.6   3.59   21.3


050   72 CHEV NOVA 307 COLD TRANS  10.95  128.2   523.7   2.56   11.7
                       COLD  STAB   6.49  100.3   594.3   1.81   11.5
IHCL  1442PPM CARBON   HOT  TRANS   7.40  110.6   465.6   1.97   13.4
IHCG   100PPM HEXANE   HOT   STAB   7.23  128.8   562.8   1.30   11.3
ICOL  0.5 % CO
ICOG  0.6 % CO         1972   FTP   8.66  113.9   559.9   2.18   11.6
                       1975   FTP   7.68  109.0   543.8   2.01   12.0
OTHER TESTS:           HOT  START   7.32  120.0   515.5   1.63   12.2
        MODAL          HFET         4.30   80.3   337.2   1.75   18.6


051   72 CHEV IMPA 350 COLD TRANS   6.12   91.8   696.3   5.23   10.3
                       COLD  STAB   3.23   39.2   721.5   3.75   11.2
IHCL  3084PPM CARBON   HOT  TRANS   3.81   48.6   601.0   4.99   12.9
IHCG   210PPM HEXANE   HOT   STAB   3.78   52.7   661.6   3.39   11.7
ICOL  2.1 % CO
ICOG  2.0 % CO         1972   FTP   4.64   64.8   709.2   4.47   10.7
                       1975   FTP   4.00   52.8   682.8   4.40   11.4
OTHER TESTS:           HOT  START   3.79   50.7   632.1   4.17   12.3
        MODAL          HFET         2.94   26.8   483.3   5.55   16.6


052   72 CHEV NOVA 350 COLD TRANS   7.26   86.5   538.1   4.33   12.7
                       COLD  STAB   5.31   75.3   519.7   2.01   13.6
IHCL  7064PPM CARBON   HOT  TRANS   5.45   72.4   466.1   3.70   14.9
IHCG   400PPM HEXANE   HOT   STAB   5.29   77.6   504.8   1.88   13.8
ICOL  6.0 % CO
ICOG  5.2 % CO         1972   FTP   6.26   80.8   528.7   3.14   13.1
                       1975   FTP   5.75   76.8   508.7   2.96   13.7
OTHER TESTS:           HOT  START   5.36   75.0   485.9   2.76   14.3
        MODAL          HFET         4.79   81.2   420.6   3.76   15.8

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN DENVER

```
                                                                  MPG
VEH                                   -----GRAMS PER MILE-----    FUEL
NO.  YR MAKE MODL CID TEST  TYPE     HC     CO     CO2   NOXC    ECON
---------------------------------------------------------------------
053  72 CHEV IMPA 350 COLD TRANS   7.39 154.9   694.5   2.98     9.2
                      COLD  STAB   4.75 107.1   576.9   1.84    11.7
IHCL  7869PPM CARBON  HOT  TRANS   5.24 100.9   571.8   3.18    11.9
IHCG   600PPM HEXANE  HOT   STAB   5.17 121.2   564.7   1.73    11.5
ICOL  5.1 % CO
ICOG  9.5 % CO        1972   FTP   6.04 130.4   634.1   2.39    10.3
                      1975   FTP   5.44 115.4   600.1   2.45    11.1
OTHER TESTS:          HOT  START   5.20 111.4   568.1   2.43    11.7
        MODAL         HFET         4.00  60.9   442.4   3.31    16.1


054  72 CHEV STAW 400 COLD TRANS   7.98 167.8   714.7   4.22     8.8
                      COLD  STAB   4.24  49.1   778.1   4.68    10.2
IHCL  3949PPM CARBON  HOT  TRANS   4.99  89.6   658.2   5.01    10.9
IHCG   290PPM HEXANE  HOT   STAB   4.35  52.8   752.6   4.56    10.4
ICOL  3.3 % CO
ICOG  3.2 % CO        1972   FTP   6.06 106.8   747.2   4.45     9.5
                      1975   FTP   5.23  85.1   731.6   4.67    10.1
OTHER TESTS:          HOT  START   4.66  70.7   706.7   4.78    10.7
        MODAL         HFET         4.37  86.4   509.1   5.03    13.5


055  72 DATS SEDA  97 COLD TRANS   4.25  24.6   349.5   3.59    22.1
                      COLD  STAB   3.90  29.2   337.3   2.17    22.4
IHCL  4775PPM CARBON  HOT  TRANS   3.78  22.4   288.7   3.71    26.4
IHCG   340PPM HEXANE  HOT   STAB   4.20  31.1   327.3   2.06    22.8
ICOL  4.2 % CO
ICOG  3.9 % CO        1972   FTP   4.07  27.0   343.3   2.86    22.3
                      1975   FTP   3.94  26.4   326.4   2.89    23.3
OTHER TESTS:          HOT  START   4.00  26.9   308.5   2.86    24.4
        MODAL         HFET         1.21   6.8   232.7   3.41    35.9


056  72 DODG DART 318 COLD TRANS   8.98 149.2   499.5   2.24    11.6
                      COLD  STAB   7.71 187.1   472.6   1.14    11.2
IHCL  5273PPM CARBON  HOT  TRANS   6.95 147.5   411.1   1.52    13.3
IHCG   375PPM HEXANE  HOT   STAB   8.75 205.3   449.7   0.91    11.1
ICOL  6.2 % CO
ICOG  7.8 % CO        1972   FTP   8.33 168.7   485.7   1.67    11.4
                      1975   FTP   7.76 168.2   461.2   1.47    11.8
OTHER TESTS:          HOT  START   7.87 177.2   430.9   1.20    12.1
        MODAL         HFET         4.57  96.4   317.7   1.35    18.3

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS ON INDIVIDUAL VEHICLES IN DENVER

```
                                                                      MPG
VEH                                  -----GRAMS PER MILE-----        FUEL
NO.  YR MAKE MODL CID TEST  TYPE    HC     CO      CO2    NOXC       ECON
---------------------------------------------------------------------------
057  72 DODG POLA 360 COLD TRANS 12.69 259.1   576.7   1.79      8.7
                      COLD  STAB 10.88 346.7   572.4   0.90      7.7
IHCL  5770PPM CARBON  HOT  TRANS 11.51 291.2   481.6   1.26      9.1
IHCG   620PPM HEXANE  HOT   STAB 14.32 420.3   537.5   0.63      7.1
ICOL  6.6 % CO
ICOG  7.2 % CO        1972   FTP 11.76 304.1   574.5   1.33      8.1
                      1975   FTP 11.44 313.0   548.1   1.18      8.2
OTHER TESTS:          HOT  START 12.95 357.5   510.3   0.93      8.0
         MODAL        HFET        6.98 225.0   351.4   0.72     12.2


058  72 FORD PINT 122 COLD TRANS  4.33  92.8   358.7   4.13     17.1
                      COLD  STAB  2.83  43.4   358.4   4.49     20.4
IHCL  2285PPM CARBON  HOT  TRANS  2.53  40.4   328.3   5.05     22.2
IHCG   180PPM HEXANE  HOT   STAB  2.75  38.6   354.5   4.35     20.9
ICOL  1.4 % CO
ICOG  1.4 % CO        1972   FTP  3.56  67.4   358.6   4.31     18.7
                      1975   FTP  3.06  52.9   350.1   4.57     20.0
OTHER TESTS:          HOT  START  2.64  39.5   341.7   4.69     21.5
         MODAL        HFET        1.73  22.7   275.6   4.82     28.0


059  72 FORD MAVE 302 COLD TRANS  5.69  57.6   510.3   4.17     14.3
                      COLD  STAB  4.05  59.5   505.9   2.26     14.5
IHCL  3283PPM CARBON  HOT  TRANS  4.34  44.9   438.8   4.00     17.0
IHCG   265PPM HEXANE  HOT   STAB  4.34  84.0   480.6   1.67     14.2
ICOL  4.3 % CO
ICOG  5.6 % CO        1972   FTP  4.85  58.6   508.1   3.19     14.4
                      1975   FTP  4.48  55.1   488.2   3.14     15.1
OTHER TESTS:          HOT  START  4.34  65.0   460.3   2.81     15.4
         MODAL        HFET        3.20  39.6   338.9   3.25     21.6


060  72 FORD TORI 351 COLD TRANS  7.91  73.7   618.5   6.85     11.7
                      COLD  STAB  9.71  54.0   635.0   5.05     11.8
IHCL  6566PPM CARBON  HOT  TRANS  7.25  63.4   534.4   6.39     13.5
IHCG   800PPM HEXANE  HOT   STAB  7.25  67.7   618.4   4.72     11.9
ICOL  2.6 % CO
ICOG  2.2 % CO        1972   FTP  8.83  63.6   627.0   5.92     11.8
                      1975   FTP  8.65  60.7   603.7   5.80     12.2
OTHER TESTS:          HOT  START  7.25  65.6   577.5   5.53     12.6
         MODAL        HFET        4.44  56.9   414.4   5.67     17.1

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN DENVER

```
                                                                       MPG
VEH                                     -----GRAMS PER MILE-----      FUEL
NO.  YR MAKE MODL CID TEST  TYPE     HC     CO     CO2    NOXC       ECON
---------------------------------------------------------------------------
061  72 FORD STAW 351 COLD TRANS   5.64  102.3   610.3   5.44       11.3
                      COLD  STAB   4.54   91.5   627.8   2.89       11.3
IHCL  3830PPM CARBON  HOT  TRANS   5.11   87.2   557.9   5.07       12.5
IHCG   270PPM HEXANE  HOT   STAB   4.55  115.2   600.8   2.42       11.1
ICOL  5.6 % CO
ICOG  3.8 % CO        1972   FTP   5.08   96.7   619.3   4.13       11.3
                      1975   FTP   4.93   92.6   604.7   4.03       11.6
OTHER TESTS:          HOT  START   4.82  101.6   579.9   3.71       11.8
         MODAL        HFET         3.57   69.6   419.8   3.91       16.4


062  72 FORD LTD  400 COLD TRANS   7.04  119.9   682.1   4.44        9.9
                      COLD  STAB   4.52  108.8   670.2   3.63       10.4
IHCL  3731PPM CARBON  HOT  TRANS   6.21  104.8   589.0   4.90       11.5
IHCG   150PPM HEXANE  HOT   STAB   4.94  131.4   614.5   2.89       10.6
ICOL  5.3 % CO
ICOG  2.8 % CO        1972   FTP   5.75  114.2   676.0   4.03       10.2
                      1975   FTP   5.52  110.0   650.2   4.16       10.6
OTHER TESTS:          HOT  START   5.56  118.4   602.1   3.87       11.0
         MODAL        HFET         3.46   77.0   466.3   4.84       14.8


063  72 FORD THUN 429 COLD TRANS   5.40  113.0   633.8   3.88       10.7
                      COLD  STAB   5.10  143.6   556.4   2.44       11.1
IHCL  8095PPM CARBON  HOT  TRANS   4.76   97.0   506.0   3.94       13.2
IHCG   500PPM HEXANE  HOT   STAB   5.28  158.6   511.3   1.96       11.4
ICOL  5.1 % CO
ICOG 10.0 % CO        1972   FTP   5.25  128.7   594.0   3.14       10.9
                      1975   FTP   5.07  124.3   558.6   3.16       11.5
OTHER TESTS:          HOT  START   5.03  128.6   508.7   2.92       12.2
         MODAL        HFET         3.10   51.0   402.6   3.76       18.0


064  72 LINC CONT 460 COLD TRANS  10.67  191.9   667.8   4.91        8.8
                      COLD  STAB   7.07  125.1   669.3   5.00       10.0
IHCL  9939PPM CARBON  HOT  TRANS   6.10  104.8   614.2   6.78       11.1
IHCG  1300PPM HEXANE  HOT   STAB   6.81  130.6   645.1   4.64       10.2
ICOL  5.6 % CO
ICOG  4.8 % CO        1972   FTP   8.82  157.6   668.6   4.96        9.4
                      1975   FTP   7.55  133.5   653.7   5.48       10.0
OTHER TESTS:          HOT  START   6.46  118.0   630.0   5.68       10.6
         MODAL        HFET         3.67   77.4   485.4   5.48       14.3

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN DENVER

```
                                                                    MPG
VEH                                    -----GRAMS PER MILE-----   FUEL
NO.  YR MAKE MODL CID TEST  TYPE    HC     CO     CO2    NOXC   ECON
------------------------------------------------------------------------
065  72 MERC MONT 400 COLD TRANS  6.77   92.5   796.8   8.68    9.2
                      COLD  STAB  4.71   55.0   775.0   6.89   10.1
IHCL  2686PPM CARBON  HOT  TRANS  6.21   67.5   688.3   9.35   10.9
IHCG   230PPM HEXANE  HOT   STAB  4.53   66.4   761.3   6.33   10.1
ICOL  2.8 % CO
ICOG  4.5 % CO        1972   FTP  5.71   73.2   785.6   7.76    9.7
                      1975   FTP  5.56   66.3   755.5   7.94   10.1
OTHER TESTS:          HOT  START  5.35   67.0   725.8   7.80   10.5
        MODAL         HFET        4.25   53.1   551.2   8.27   13.7


066  72 OLDS CUTL 350 COLD TRANS  8.48  160.2   606.3   3.21   10.0
                      COLD  STAB  4.14   30.6   650.9   3.75   12.5
IHCL  3114PPM CARBON  HOT  TRANS  6.12  102.3   533.4   3.90   12.4
IHCG   100PPM HEXANE  HOT   STAB  4.30   40.6   633.9   3.53   12.5
ICOL  2.3 % CO
ICOG  1.0 % CO        1972   FTP  6.25   93.7   629.2   3.49   11.1
                      1975   FTP  5.60   77.6   609.0   3.68   11.9
OTHER TESTS:          HOT  START  5.19   70.6   585.0   3.71   12.5
        MODAL         HFET        3.35   38.4   446.9   5.96   17.1


067  72 OLDS DELT 455 COLD TRANS  2.86   55.4   726.6   4.91   10.8
                      COLD  STAB  2.09   21.7   756.2   2.91   11.1
IHCL  2729PPM CARBON  HOT  TRANS  2.34   25.4   627.4   4.90   13.2
IHCG   240PPM HEXANE  HOT   STAB  2.27   25.2   726.3   2.42   11.5
ICOL  3.9 % CO
ICOG  4.0 % CO        1972   FTP  2.46   38.1   741.8   3.89   11.0
                      1975   FTP  2.32   29.8   714.3   3.88   11.6
OTHER TESTS:          HOT  START  2.30   25.3   678.2   3.63   12.2
        MODAL         HFET        1.67   11.8   450.5   9.41   18.7


068  72 OPEL 1900 116 COLD TRANS  8.78  117.6   322.9   2.28   16.6
                      COLD  STAB  3.90   58.9   353.5   1.88   19.4
IHCL  3681PPM CARBON  HOT  TRANS  3.34   47.3   286.3   2.36   23.9
IHCG   150PPM HEXANE  HOT   STAB  3.78   60.2   330.1   1.77   20.3
ICOL  5.8 % CO
ICOG  5.4 % CO        1972   FTP  6.28   87.5   338.6   2.07   17.9
                      1975   FTP  4.77   68.0   328.4   2.10   19.7
OTHER TESTS:          HOT  START  3.57   53.9   308.8   2.06   21.9
        MODAL         HFET        3.39   23.5   241.5   2.79   30.7

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN DENVER

```
                                                              MPG
VEH                              -----GRAMS PER MILE-----    FUEL
NO.  YR MAKE MODL CID TEST  TYPE   HC    CO     CO2   NOXC   ECON
-----------------------------------------------------------------
069  72 PLYM DUST 198 COLD TRANS  6.84 127.6   328.2  2.18   16.1
                      COLD  STAB  8.09 137.3   308.4  1.66   16.1
IHCL  3979PPM CARBON  HOT  TRANS  4.22  97.2   307.6  2.59   18.7
IHCG   240PPM HEXANE  HOT   STAB  5.28 124.3   313.5  1.61   16.9
ICOL  4.5 % CO
ICOG  3.6 % CO        1972   FTP  7.48 132.6   318.0  1.91   16.1
                      1975   FTP  6.75 124.1   312.3  2.03   16.8
OTHER TESTS:          HOT  START  4.76 111.1   310.6  2.08   17.7
        MODAL         HFET        2.46  58.3   260.8  3.48   24.6


070  72 PLYM SATE 318 COLD TRANS  6.93  94.1   583.5  3.68   11.8
                      COLD  STAB  5.61  64.2   563.4  2.98   13.0
IHCL  1611PPM CARBON  HOT  TRANS  5.31  78.3   493.2  3.36   14.0
IHCG   100PPM HEXANE  HOT   STAB  5.53  73.1   532.5  2.44   13.3
ICOL  0.1 % CO
ICOG  0.1 % CO        1972   FTP  6.25  78.8   573.2  3.32   12.4
                      1975   FTP  5.80  74.4   548.1  3.23   13.0
OTHER TESTS:          HOT  START  5.42  75.6   513.3  2.89   13.7
        MODAL         HFET        5.36  99.2   403.8  2.83   15.4


071  72 PONT LEMA 350 COLD TRANS  9.38 161.8   579.6  1.89   10.3
                      COLD  STAB  4.69  93.7   646.5  1.91   11.0
IHCL  6815PPM CARBON  HOT  TRANS  4.67  89.4   520.3  2.79   13.1
IHCG   480PPM HEXANE  HOT   STAB  4.82  97.2   608.4  1.77   11.4
ICOL  5.6 % CO
ICOG  7.3 % CO        1972   FTP  6.97 126.8   613.9  1.90   10.6
                      1975   FTP  5.67 106.7   597.5  2.15   11.3
OTHER TESTS:          HOT  START  4.75  93.4   565.5  2.27   12.2
        MODAL         HFET        3.27  46.6   402.7  3.29   16.3


072  72 PONT BONN 455 COLD TRANS  7.47 138.8   762.1  3.81    8.8
                      COLD  STAB  4.62  69.8   804.7  2.58    9.6
IHCL  6168PPM CARBON  HOT  TRANS  5.53  90.5   635.7  3.89   11.2
IHCG   320PPM HEXANE  HOT   STAB  5.26  99.1   751.1  2.59    9.6
ICOL  6.2 % CO
ICOG  3.5 % CO        1972   FTP  6.01 103.4   784.0  3.18    9.2
                      1975   FTP  5.47  90.0   748.9  3.20    9.8
OTHER TESTS:          HOT  START  5.39  94.9   694.9  3.22   10.3
        MODAL         HFET        3.95  75.6   520.2  4.36   13.6

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN DENVER

```
                                                                  MPG
VEH                                   -----GRAMS PER MILE-----   FUEL
NO.  YR MAKE MODL CID TEST  TYPE    HC     CO     CO2    NOXC   ECON
------------------------------------------------------------------------
073  72 TOYO CORO  97 COLD TRANS   4.59   63.9   345.2   3.64   19.3
                      COLD  STAB   3.75   50.1   313.0   1.83   22.0
IHCL  4268PPM CARBON  HOT  TRANS   3.30   49.5   297.1   2.89   23.0
IHCG   180PPM HEXANE  HOT   STAB   3.47   48.2   306.5   1.87   22.6
ICOL  3.3 % CO
ICOG  1.5 % CO        1972   FTP   4.16   56.8   328.6   2.71   20.6
                      1975   FTP   3.80   52.8   315.3   2.50   21.6
OTHER TESTS:          HOT  START   3.39   48.9   301.9   2.37   22.8
       MODAL          HFET         2.34   37.6   250.1   3.42   28.0


074  72 VOLK SEDA  97 COLD TRANS   4.91   57.3   300.1   3.18   21.9
                      COLD  STAB   4.62   70.8   301.1   1.56   20.8
IHCL  3462PPM CARBON  HOT  TRANS   3.66   49.4   267.9   2.54   24.8
IHCG   160PPM HEXANE  HOT   STAB   4.34   68.7   302.0   1.50   21.0
ICOL  3.8 % CO
ICOG  3.4 % CO        1972   FTP   4.76   64.2   300.6   2.35   21.3
                      1975   FTP   4.41   62.0   291.7   2.17   22.0
OTHER TESTS:          HOT  START   4.01   59.3   285.4   2.01   22.7
       MODAL          HFET         1.62   30.6   216.4   2.69   32.9


075  72 VOLK SEDA  97 COLD TRANS   8.01   94.9   293.0   3.86   19.0
                      COLD  STAB   6.99  106.9   311.7   1.98   17.7
IHCL  3283PPM CARBON  HOT  TRANS   5.82   84.3   278.0   3.02   20.7
IHCG   160PPM HEXANE  HOT   STAB   6.64  100.2   322.8   2.40   17.7
ICOL  2.7 % CO
ICOG  2.4 % CO        1972   FTP   7.49  101.1   302.6   2.89   18.3
                      1975   FTP   6.88   98.1   298.4   2.66   18.7
OTHER TESTS:          HOT  START   6.24   92.5   301.0   2.70   19.0
       MODAL          HFET         1.83   46.9   174.8   2.84   34.9


076  71 AMMO STAW 304 COLD TRANS   6.59   97.3   499.1   4.46   13.2
                      COLD  STAB   4.28  120.0   504.3   2.08   12.6
IHCL  9939PPM CARBON  HOT  TRANS   6.17   95.1   453.2   4.01   14.3
IHCG   350PPM HEXANE  HOT   STAB   4.26  117.2   500.2   2.29   12.7
ICOL  8.2 % CO
ICOG  5.8 % CO        1972   FTP   5.41  108.9   501.8   3.24   12.9
                      1975   FTP   5.29  108.3   489.1   3.11   13.1
OTHER TESTS:          HOT  START   5.19  106.5   477.3   3.13   13.4
       NONE           HFET         2.96   63.1   359.9   4.13   18.9

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS ON INDIVIDUAL VEHICLES IN DENVER

```
                                                                         MPG
VEH                                        -----GRAMS PER MILE-----     FUEL
NO.  YR MAKE MODL CID TEST   TYPE    HC     CO      CO2     NOXC       ECON
---------------------------------------------------------------------------
077  71 BUIC SKYL 350 COLD  TRANS  11.39  177.4   589.2    1.79        9.8
                      COLD   STAB   3.86   72.3   641.9    2.20       11.6
IHCL   9939PPM CARBON HOT   TRANS   4.61   92.1   554.2    2.37       12.4
IHCG    420PPM HEXANE HOT    STAB   3.90   77.2   618.5    2.19       11.8
ICOL  5.6 % CO
ICOG  5.3 % CO        1972    FTP   7.52  123.4   616.2    2.00       10.6
                      1975    FTP   5.64   99.8   606.5    2.16       11.4
OTHER TESTS:          HOT   START   4.25   84.4   587.2    2.28       12.1
       NONE           HFET          2.15   48.0   470.5    2.68       16.1


078  71 BUIC ELEC 455 COLD  TRANS   6.45  131.3   752.9    5.04        9.1
                      COLD   STAB   5.24   93.4   757.9    3.11        9.6
IHCL   6168PPM CARBON HOT   TRANS   4.95   99.8   642.2    4.95       10.9
IHCG    190PPM HEXANE HOT    STAB   4.93   93.5   714.6    2.79       10.1
ICOL  5.6 % CO
ICOG  3.2 % CO        1972    FTP   5.83  111.8   755.5    4.05        9.3
                      1975    FTP   5.41  103.1   724.8    4.03        9.8
OTHER TESTS:          HOT   START   4.94   96.6   679.4    3.84       10.5
       NONE           HFET          3.67   75.5   495.9    4.94       14.2


079  71 CADI DEVI 472 COLD  TRANS   4.17  126.4   848.6    3.48        8.4
                      COLD   STAB   2.59   66.5   873.1    3.10        9.0
IHCL   1353PPM CARBON HOT   TRANS   3.20  108.4   736.3    3.62        9.7
IHCG     90PPM HEXANE HOT    STAB   2.65   94.9   839.3    2.08        8.9
ICOL  2.1 % CO
ICOG  2.0 % CO        1972    FTP   3.36   95.6   861.1    3.29        8.7
                      1975    FTP   3.09   90.6   830.0    3.33        9.0
OTHER TESTS:          HOT   START   3.02  101.5   789.2    2.83        9.3
       NONE           HFET          1.92   69.7   629.3    3.39       11.9


080  71 CHEV VEGA 140 COLD  TRANS   4.78   93.8   395.0    4.43       15.9
                      COLD   STAB   3.20   96.2   358.7    1.70       17.1
IHCL   9700PPM CARBON HOT   TRANS   2.95   69.1   346.6    4.01       19.1
IHCG    300PPM HEXANE HOT    STAB   3.12   99.2   314.8    1.57       18.5
ICOL  5.6 % CO
ICOG  5.0 % CO        1972    FTP   3.97   95.0   376.4    3.02       16.5
                      1975    FTP   3.46   88.2   363.0    2.91       17.3
OTHER TESTS:          HOT   START   3.03   84.5   330.3    2.76       18.8
       NONE           HFET          2.16   65.1   309.2    3.52       21.2

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN DENVER

```
                                                                    MPG
VEH                                      -----GRAMS PER MILE-----  FUEL
NO.  YR MAKE MODL CID TEST  TYPE    HC     CO     CO2    NOXC   ECON
----------------------------------------------------------------------
081  71 CHEV MALI 307 COLD TRANS 10.59 132.4   466.8   2.29   12.5
                      COLD  STAB  6.53  56.6   507.4   3.01   14.4
IHCL  6069PPM CARBON  HOT  TRANS  6.72  96.6   414.1   2.28   15.1
IHCG   540PPM HEXANE  HOT   STAB  7.04  75.3   476.5   2.50   14.4
ICOL  3.6 % CO
ICOG  3.8 % CO        1972   FTP  8.51  93.5   487.7   2.66   13.4
                      1975   FTP  7.43  83.5   473.1   2.66   14.1
OTHER TESTS:          HOT  START  6.89  85.7   446.2   2.39   14.7
        NONE          HFET        4.68  67.9   335.9   2.57   19.4


082  71 CHEV NOVA 350 COLD TRANS  7.86 129.5   530.9   2.48   11.7
                      COLD  STAB  6.01  90.8   582.9   2.17   11.9
IHCL  7661PPM CARBON  HOT  TRANS  5.49  99.3   473.9   2.56   13.7
IHCG   530PPM HEXANE  HOT   STAB  6.63 114.2   553.4   1.87   11.8
ICOL  5.6 % CO
ICOG  7.8 % CO        1972   FTP  6.91 109.7   557.6   2.32   11.8
                      1975   FTP  6.25 101.3   541.8   2.35   12.3
OTHER TESTS:          HOT  START  6.07 106.9   514.7   2.21   12.6
        NONE          HFET        4.35  79.3   356.8   2.23   17.9


083  71 CHEV MALI 350 COLD TRANS  6.49 133.5   508.3   2.16   12.0
                      COLD  STAB  5.91 121.0   430.6   1.39   13.9
IHCL  5553PPM CARBON  HOT  TRANS  5.97 113.8   376.3   1.85   15.5
IHCG   550PPM HEXANE  HOT   STAB  6.82 145.8   396.2   1.10   13.7
ICOL  5.1 % CO
ICOG  6.5 % CO        1972   FTP  6.19 127.1   468.4   1.77   12.9
                      1975   FTP  6.05 121.6   431.8   1.68   13.8
OTHER TESTS:          HOT  START  6.40 130.2   386.5   1.46   14.5
        NONE          HFET        4.09  95.0   327.9   1.70   18.1


084  71 CHEV IMPA 350 COLD TRANS  8.39 180.4   516.4   1.67   10.7
                      COLD  STAB  4.43  69.4   598.0   2.57   12.3
IHCL  3979PPM CARBON  HOT  TRANS  4.01  77.1   481.7   2.75   14.4
IHCG   280PPM HEXANE  HOT   STAB  4.00  71.0   543.1   2.17   13.3
ICOL  3.8 % CO
ICOG  3.5 % CO        1972   FTP  6.36 123.4   558.3   2.13   11.5
                      1975   FTP  5.14  94.7   548.6   2.43   12.4
OTHER TESTS:          HOT  START  4.01  74.0   513.2   2.45   13.8
        NONE          HFET        2.96  74.8   358.1   2.14   18.3

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS ON INDIVIDUAL VEHICLES IN DENVER

```
                                                               MPG
VEH                                  -----GRAMS PER MILE-----  FUEL
NO.  YR MAKE MODL CID TEST  TYPE   HC    CO     CO2    NOXC    ECON
--------------------------------------------------------------------
085  71 CHEV IMPA 400 COLD TRANS  8.93 181.1   626.0   2.67     9.5
                      COLD  STAB  5.31  99.6   665.7   2.77    10.6
IHCL  4676PPM CARBON  HOT  TRANS  5.49 112.1   550.9   3.08    11.9
IHCG   350PPM HEXANE  HOT   STAB  5.65 113.9   618.8   2.39    10.9
ICOL  4.8 % CO
ICOG  4.6 % CO        1972   FTP  7.07 139.3   646.4   2.72    10.0
                      1975   FTP  6.12 120.1   625.5   2.83    10.6
OTHER TESTS:          HOT  START  5.57 113.0   585.7   2.72    11.4
        NONE          HFET        3.91  86.2   428.7   2.98    15.4


086  71 CHRY 300  440 COLD TRANS 10.00 190.3   660.8   2.06     9.0
                      COLD  STAB  4.64 117.3   688.0   1.92    10.0
IHCL  6367PPM CARBON  HOT  TRANS  4.30 112.9   564.2   2.16    11.8
IHCG   250PPM HEXANE  HOT   STAB  5.15 137.8   658.1   1.71    10.0
ICOL  5.6 % CO
ICOG  4.2 % CO        1972   FTP  7.25 152.8   674.8   1.99     9.5
                      1975   FTP  5.67 131.3   648.0   2.02    10.2
OTHER TESTS:          HOT  START  4.74 125.7   612.4   1.93    10.8
        NONE          HFET        3.92 104.5   454.5   2.21    14.1


087  71 DATS SEDA  71 COLD TRANS  3.55  57.8   273.9   3.25    23.6
                      COLD  STAB  4.15  43.0   275.3   2.99    24.9
IHCL  9939PPM CARBON  HOT  TRANS  4.22  47.5   232.4   3.28    27.7
IHCG  1600PPM HEXANE  HOT   STAB  4.10  45.1   246.9   2.57    26.8
ICOL  0.6 % CO
ICOG  2.3 % CO        1972   FTP  3.86  50.2   274.6   3.12    24.3
                      1975   FTP  4.04  47.3   263.1   3.13    25.3
OTHER TESTS:          HOT  START  4.16  46.3   239.8   2.91    27.2
        NONE          HFET        1.49  32.5   184.2   2.87    37.0


088  71 DODG VAN  318 COLD TRANS 11.44 148.1   511.4   2.09    11.4
                      COLD  STAB  9.22 128.7   513.9   1.54    11.9
IHCL  8357PPM CARBON  HOT  TRANS  7.23 112.4   503.7   2.80    12.6
IHCG   500PPM HEXANE  HOT   STAB  9.58 143.2   525.9   1.44    11.4
ICOL  4.4 % CO
ICOG  3.4 % CO        1972   FTP 10.30 138.2   512.7   1.81    11.6
                      1975   FTP  9.13 128.3   510.6   2.00    12.0
OTHER TESTS:          HOT  START  8.44 128.2   515.1   2.10    11.9
        NONE          HFET        4.62  60.6   432.9   3.67    16.4

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS ON INDIVIDUAL VEHICLES IN DENVER

```
                                                                   MPG
VEH                                    -----GRAMS PER MILE-----   FUEL
NO.  YR MAKE MODL CID TEST  TYPE     HC     CO     CO2    NOXC    ECON
----------------------------------------------------------------------
089  71 FORD PINT 122 COLD TRANS   6.51   74.0   280.8   2.54    21.2
                      COLD  STAB   6.90   79.6   299.9   2.15    19.9
IHCL  9939PPM CARBON  HOT  TRANS   5.17   61.7   267.3   2.84    23.3
IHCG   320PPM HEXANE  HOT   STAB   6.49   80.6   301.9   2.15    19.8
ICOL  5.6 % CO
ICOG  6.3 % CO        1972   FTP   6.71   76.9   290.6   2.34    20.5
                      1975   FTP   6.34   73.4   286.9   2.42    21.0
OTHER TESTS:          HOT  START   5.85   71.4   285.1   2.48    21.3
        NONE          HFET         1.94   30.0   226.2   3.16    31.8


090  71 FORD MAVE 200 COLD TRANS   3.74   64.0   394.6   5.54    17.5
                      COLD  STAB   3.17   71.9   378.1   4.11    17.7
IHCL  3681PPM CARBON  HOT  TRANS   2.90   42.3   371.9   6.41    19.8
IHCG   150PPM HEXANE  HOT   STAB   3.02   57.3   394.9   5.08    17.9
ICOL  4.9 % CO
ICOG  3.2 % CO        1972   FTP   3.45   68.1   386.1   4.81    17.6
                      1975   FTP   3.21   62.0   379.8   5.05    18.2
OTHER TESTS:          HOT  START   2.96   50.0   383.7   5.73    18.8
        NONE          HFET         1.65   14.5   312.4   7.21    26.1


091  71 FORD STAW 302 COLD TRANS  10.14  164.3   543.3   3.62    10.6
                      COLD  STAB   7.18  139.1   545.6   4.27    11.3
IHCL  8158PPM CARBON  HOT  TRANS   9.90  133.0   499.2   4.46    12.0
IHCG   280PPM HEXANE  HOT   STAB   6.97  133.9   543.1   4.20    11.4
ICOL  5.6 % CO
ICOG  5.8 % CO        1972   FTP   8.62  151.4   544.5   3.95    11.0
                      1975   FTP   8.55  142.7   532.3   4.18    11.3
OTHER TESTS:          HOT  START   8.40  133.5   521.7   4.33    11.7
        NONE          HFET         4.30   55.7   444.2   6.39    16.3


092  71 FORD MUST 351 COLD TRANS   6.97   97.0   518.9   3.60    12.8
                      COLD  STAB   8.22   78.2   506.0   2.39    13.6
IHCL  7959PPM CARBON  HOT  TRANS   7.33   82.8   562.1   4.24    12.4
IHCG   600PPM HEXANE  HOT   STAB  10.02   81.2   577.5   2.59    12.0
ICOL  2.1 % CO
ICOG  1.1 % CO        1972   FTP   7.61   87.3   512.3   2.98    13.2
                      1975   FTP   7.71   83.4   524.3   3.16    13.1
OTHER TESTS:          HOT  START   8.71   82.0   570.0   3.39    12.2
        NONE          HFET         3.67   61.1   397.6   3.75    17.6

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS ON INDIVIDUAL VEHICLES IN DENVER

```
                                                                  MPG
VEH                                    -----GRAMS PER MILE-----   FUEL
NO.  YR MAKE MODL CID TEST  TYPE    HC     CO     CO2    NOXC    ECON
----------------------------------------------------------------------
093  71 FORD THUN 429 COLD TRANS  8.55  117.4  668.5   3.63    10.1
                      COLD  STAB  4.21   94.8  763.5   3.44     9.6
IHCL  7949PPM CARBON  HOT  TRANS  5.15   91.4  619.6   4.78    11.4
IHCG   280PPM HEXANE  HOT   STAB  4.32   97.6  731.4   3.51     9.9
ICOL  5.6 % CO
ICOG  3.0 % CO        1972   FTP  6.32  105.8  717.2   3.53     9.8
                      1975   FTP  5.38   98.6  703.7   3.85    10.1
OTHER TESTS:          HOT  START  4.72   94.6  677.0   4.13    10.6
        NONE          HFET        3.13   55.3  479.9   4.78    15.4


094  71 MERC MONT 400 COLD TRANS  5.58  117.7  658.6   7.76    10.3
                      COLD  STAB  3.91   93.8  650.8   6.47    11.0
IHCL  4298PPM CARBON  HOT  TRANS  3.89   59.0  671.6   9.92    11.4
IHCG   340PPM HEXANE  HOT   STAB  4.01   86.3  657.2   5.65    11.0
ICOL  5.0 % CO
ICOG  5.5 % CO        1972   FTP  4.72  105.4  654.6   7.10    10.6
                      1975   FTP  4.25   89.1  658.2   7.70    10.9
OTHER TESTS:          HOT  START  3.95   73.0  664.2   7.73    11.2
        NONE          HFET        2.23   36.9  478.5   8.46    16.3


095  71 OLDS CUTL 350 COLD TRANS  6.40  119.4  540.1   4.83    11.9
                      COLD  STAB  4.62  102.6  540.7   3.87    12.4
IHCL  4527PPM CARBON  HOT  TRANS  5.12   98.5  469.4   4.43    13.9
IHCG   220PPM HEXANE  HOT   STAB  4.50  109.0  522.2   3.13    12.5
ICOL  5.6 % CO
ICOG  4.8 % CO        1972   FTP  5.49  110.8  540.4   4.34    12.1
                      1975   FTP  5.13  105.0  520.8   4.23    12.6
OTHER TESTS:          HOT  START  4.80  103.9  496.5   3.76    13.1
        NONE          HFET        3.21   60.9  398.4   4.98    17.6


096  71 OLDS DELT 455 COLD TRANS  5.78  164.9  720.9   2.05     8.9
                      COLD  STAB  3.50   89.2  816.2   2.30     9.2
IHCL  2785PPM CARBON  HOT  TRANS  4.53  116.6  652.0   2.14    10.4
IHCG   180PPM HEXANE  HOT   STAB  3.49   83.7  818.1   2.33     9.2
ICOL  6.6 % CO
ICOG  3.4 % CO        1972   FTP  4.61  126.0  769.8   2.18     9.0
                      1975   FTP  4.26  112.6  750.7   2.20     9.4
OTHER TESTS:          HOT  START  3.99   99.8  737.2   2.24     9.8
        NONE          HFET        2.29   62.0  491.2   2.33    14.9

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN DENVER

```
                                                                MPG
VEH                                  -----GRAMS PER MILE-----  FUEL
NO.  YR MAKE MODL CID TEST  TYPE   HC    CO     CO2    NOXC   ECON
--------------------------------------------------------------------
097  71 PLYM SCAM 225 COLD TRANS 13.73 128.7   353.3   4.19   14.8
                      COLD  STAB  3.80  60.1   336.4   4.27   20.0
IHCL  4047PPM CARBON  HOT  TRANS  3.42  53.5   340.2   5.17   20.4
IHCG   430PPM HEXANE  HOT   STAB  3.76  59.0   328.9   4.18   20.5
ICOL  5.0 % CO
ICOG  5.5 % CO        1972   FTP  8.64  93.5   344.6   4.23   17.1
                      1975   FTP  5.78  72.6   341.0   4.50   18.7
OTHER TESTS:          HOT  START  3.59  56.3   334.4   4.66   20.4
        NONE          HFET        2.28  35.2   306.9   5.56   24.0


098  71 PLYM SATE 318 COLD TRANS  6.57 112.6   527.4   3.69   12.2
                      COLD  STAB  4.22 102.5   495.3   2.23   13.3
IHCL  9939PPM CARBON  HOT  TRANS  4.87  87.0   447.3   4.18   14.8
IHCG   200PPM HEXANE  HOT   STAB  5.34 135.6   454.4   1.42   13.0
ICOL  6.6 % CO
ICOG  3.2 % CO        1972   FTP  5.36 107.4   510.9   2.94   12.7
                      1975   FTP  4.89 100.3   488.7   3.08   13.4
OTHER TESTS:          HOT  START  5.11 111.9   450.9   2.76   13.8
        NONE          HFET        2.84  71.6   364.6   3.07   18.3


099  71 PONT FIRE 350 COLD TRANS  8.69 136.4   619.3   3.49   10.3
                      COLD  STAB  5.65  84.8   654.4   2.37   11.0
IHCL  4447PPM CARBON  HOT  TRANS  6.67 120.4   524.5   2.87   12.1
IHCG   210PPM HEXANE  HOT   STAB  7.15 154.2   575.3   1.08   10.6
ICOL  4.3 % CO
ICOG  4.0 % CO        1972   FTP  7.13 109.9   637.4   2.92   10.7
                      1975   FTP  6.57 105.5   611.1   2.75   11.1
OTHER TESTS:          HOT  START  6.92 137.8   550.6   1.95   11.2
        NONE          HFET        4.69 111.9   384.6   2.33   15.4


100  71 PONT CATA 400 COLD TRANS  7.31 147.4   624.5   3.56   10.1
                      COLD  STAB  4.56  91.2   692.5   2.77   10.4
IHCL  4357PPM CARBON  HOT  TRANS  5.01 105.5   564.5   4.15   11.9
IHCG   280PPM HEXANE  HOT   STAB  5.33 124.8   653.8   2.14   10.2
ICOL  4.4 % CO
ICOG  3.4 % CO        1972   FTP  5.90 118.5   659.4   3.15   10.3
                      1975   FTP  5.26 106.9   642.8   3.32   10.7
OTHER TESTS:          HOT  START  5.18 115.4   610.3   3.12   11.0
        NONE          HFET        3.63  80.5   429.0   4.06   15.7

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN DENVER

```
                                                                    MPG
VEH                                    -----GRAMS PER MILE-----     FUEL
NO.  YR MAKE MODL CID TEST  TYPE    HC     CO     CO2    NOXC    ECON
-----------------------------------------------------------------------
101  71 TOYO CORO  97 COLD TRANS   4.52   58.5   283.8   3.94    22.8
                      COLD  STAB   3.98   73.0   300.0   2.13    20.8
IHCL  3780PPM CARBON  HOT  TRANS   3.42   49.6   258.9   3.51    25.5
IHCG   140PPM HEXANE  HOT   STAB   3.99   71.3   288.1   1.95    21.5
ICOL  3.8 % CO
ICOG  2.0 % CO        1972   FTP   4.24   66.0   292.1   3.01    21.7
                      1975   FTP   3.94   63.5   285.2   2.89    22.3
OTHER TESTS:          HOT  START   3.71   60.8   273.9   2.71    23.3
        NONE          HFET         1.77   24.8   216.0   4.12    34.1


102  71 VOLK SEDA  97 COLD TRANS   5.48   76.7   290.3   2.30    20.7
                      COLD  STAB   4.71   90.6   326.9   1.54    18.3
IHCL  2535PPM CARBON  HOT  TRANS   3.90   71.9   272.6   2.03    22.3
IHCG   160PPM HEXANE  HOT   STAB   4.50   88.3   336.7   1.63    18.1
ICOL  1.9 % CO
ICOG  1.7 % CO        1972   FTP   5.09   83.8   309.1   1.91    19.4
                      1975   FTP   4.65   82.5   304.2   1.83    19.8
OTHER TESTS:          HOT  START   4.20   80.3   305.5   1.82    19.9
        NONE          HFET         1.57   41.9   205.1   2.03    32.2


103  70 BUIC STAW 455 COLD TRANS   9.82  139.6   647.8   7.59     9.9
                      COLD  STAB   8.09  110.9   635.3   8.68    10.6
IHCL  9452PPM CARBON  HOT  TRANS   6.23   83.7   577.5   9.30    12.2
IHCG   700PPM HEXANE  HOT   STAB   7.82  104.5   627.4   8.33    10.9
ICOL  6.6 % CO
ICOG  7.8 % CO        1972   FTP   8.93  124.9   641.4   8.15    10.2
                      1975   FTP   7.94  109.4   621.9   8.63    10.8
OTHER TESTS:          HOT  START   7.04   94.4   603.1   8.80    11.5
        NONE          HFET         3.32   23.3   498.2  10.49    16.3


104  70 CHEV STAW 250 COLD TRANS  14.64  152.3   400.5   1.77    12.9
                      COLD  STAB   6.26  152.8   422.6   0.81    13.0
IHCL  3432PPM CARBON  HOT  TRANS   8.92  153.8   375.6   1.64    13.7
IHCG   140PPM HEXANE  HOT   STAB   5.54  134.5   430.1   0.91    13.5
ICOL  3.3 % CO
ICOG  2.4 % CO        1972   FTP  10.34  152.5   411.9   1.28    13.0
                      1975   FTP   8.75  153.0   404.9   1.24    13.2
OTHER TESTS:          HOT  START   7.19  143.9   403.5   1.26    13.6
        NONE          HFET         5.32   72.3   360.2   3.31    18.1

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS ON INDIVIDUAL VEHICLES IN DENVER

```
                                                                        MPG
VEH                                      -----GRAMS PER MILE-----      FUEL
NO.  YR MAKE MODL CID TEST  TYPE     HC     CO     CO2    NOXC       ECON
---------------------------------------------------------------------------
105  70 CHEV NOVA 307 COLD TRANS  15.57  138.8   452.6    3.36      12.3
                      COLD  STAB   9.88   99.4   479.3    3.23      13.3
IHCL  7511PPM CARBON  HOT  TRANS  10.28  108.1   393.6    2.99      14.9
IHCG   640PPM HEXANE  HOT   STAB   8.31   98.0   446.9    2.76      14.1
ICOL  5.2 % CO
ICOG  5.0 % CO        1972   FTP  12.65  118.6   466.3    3.29      12.8
                      1975   FTP  11.18  110.0   450.0    3.19      13.5
OTHER TESTS:          HOT  START   9.27  102.9   421.0    2.87      14.5
        NONE          HFET         5.00   66.5   310.7    3.01      20.6


106  70 CHEV IMPA 350 COLD TRANS   8.06  146.1   530.6    4.03      11.3
                      COLD  STAB   5.96  101.7   536.5    4.08      12.4
IHCL  9850PPM CARBON  HOT  TRANS   5.53   97.0   481.3    4.72      13.6
IHCG   700PPM HEXANE  HOT   STAB   5.93   94.9   522.7    3.81      12.9
ICOL  5.6 % CO
ICOG  8.4 % CO        1972   FTP   6.98  123.3   533.6    4.05      11.8
                      1975   FTP   6.28  109.7   519.9    4.25      12.5
OTHER TESTS:          HOT  START   5.74   95.9   502.6    4.25      13.2
        NONE          HFET         3.69   61.2   399.6    5.30      17.5


107  70 CHEV IMPA 350 COLD TRANS  12.06  143.1   501.2    2.35      11.6
                      COLD  STAB   4.50   76.9   563.1    3.37      12.7
IHCL  4079PPM CARBON  HOT  TRANS   5.33   70.3   504.9    3.73      14.0
IHCG   140PPM HEXANE  HOT   STAB   5.00  208.6   568.9    3.48       9.7
ICOL  4.0 % CO
ICOG  1.8 % CO        1972   FTP   8.18  109.1   533.0    2.87      12.2
                      1975   FTP   6.32   88.9   534.0    3.26      12.8
OTHER TESTS:          HOT  START   5.16  141.3   537.8    3.60      11.4
        NONE          HFET         4.01   75.2   414.9    3.80      16.3


108  70 CHEV MALI 350 COLD TRANS  18.52  247.7   376.3    0.81      10.8
                      COLD  STAB   5.72  115.7   429.6    1.43      14.1
IHCL  4407PPM CARBON  HOT  TRANS   5.24  115.2   376.7    1.41      15.5
IHCG   300PPM HEXANE  HOT   STAB   4.95   98.8   425.6    1.47      14.9
ICOL  3.4 % CO
ICOG  2.6 % CO        1972   FTP  11.95  179.9   403.6    1.13      12.3
                      1975   FTP   8.27  143.2   403.8    1.30      13.6
OTHER TESTS:          HOT  START   5.09  106.8   401.8    1.44      15.2
        NONE          HFET         3.58   90.1   325.8    1.36      18.5

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN DENVER

```
                                                                       MPG
VEH                                   -----GRAMS PER MILE-----         FUEL
NO.  YR MAKE MODL CID TEST   TYPE     HC     CO     CO2    NOXC        ECON
---------------------------------------------------------------------------
109  70 CHEV IMPA 400 COLD TRANS    8.37  153.9   561.5   3.40         10.7
                      COLD  STAB    6.23  106.3   558.2   3.24         11.9
IHCL  7263PPM CARBON  HOT  TRANS    5.08   83.0   511.2   4.26         13.5
IHCG   460PPM HEXANE  HOT   STAB    6.21  116.6   536.9   2.99         12.0
ICOL  5.6 % CO
ICOG  7.8 % CO        1972   FTP    7.27  129.5   559.8   3.32         11.3
                      1975   FTP    6.36  109.8   545.8   3.56         12.0
OTHER TESTS:          HOT  START    5.66  100.3   524.4   3.61         12.7
        NONE          HFET          3.44   58.4   407.4   3.80         17.4


110  70 DODG POLA 383 COLD TRANS   11.14  188.3   592.7   2.47          9.6
                      COLD  STAB    6.37  114.3   600.4   2.33         11.1
IHCL  4974PPM CARBON  HOT  TRANS    7.38  138.5   530.8   2.64         11.5
IHCG   280PPM HEXANE  HOT   STAB    7.58  143.0   571.4   1.90         10.8
ICOL  3.5 % CO
ICOG  5.0 % CO        1972   FTP    8.69  150.3   596.7   2.40         10.3
                      1975   FTP    7.65  136.5   579.5   2.44         10.8
OTHER TESTS:          HOT  START    7.48  140.8   551.7   2.26         11.1
        NONE          HFET          5.68  119.0   437.4   2.78         13.8


111  70 FORD MAVE 200 COLD TRANS    6.54  115.3   405.0   2.14         14.6
                      COLD  STAB    4.79   98.8   366.2   1.25         16.5
IHCL  6517PPM CARBON  HOT  TRANS    4.98   89.6   330.8   1.80         18.2
IHCG   380PPM HEXANE  HOT   STAB    5.70  120.3   340.2   0.83         16.2
ICOL  6.3 % CO
ICOG  5.5 % CO        1972   FTP    5.64  106.8   385.1   1.68         15.5
                      1975   FTP    5.20   99.7   364.5   1.59         16.5
OTHER TESTS:          HOT  START    5.35  105.4   335.6   1.30         17.1
        NONE          HFET          3.30   62.6   264.0   1.97         23.8


112  70 FORD MUST 302 COLD TRANS    5.71   79.0   529.1   4.21         13.2
                      COLD  STAB    3.75   51.7   546.7   1.84         13.9
IHCL  1924PPM CARBON  HOT  TRANS    5.05   50.2   449.4   3.74         16.3
IHCG   140PPM HEXANE  HOT   STAB    3.64   55.6   526.4   1.60         14.2
ICOL  0.4 % CO
ICOG  0.5 % CO        1972   FTP    4.70   65.0   538.1   3.00         13.5
                      1975   FTP    4.52   57.0   516.0   2.86         14.3
OTHER TESTS:          HOT  START    4.33   52.9   488.9   2.64         15.1
        NONE          HFET          3.35   39.1   339.1   3.86         21.6

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN DENVER

```
                                                                     MPG
VEH                                     -----GRAMS PER MILE-----     FUEL
NO.   YR MAKE MODL CID TEST   TYPE    HC     CO     CO2     NOXC    ECON
--------------------------------------------------------------------------
113   70 FORD TORI 351 COLD  TRANS   5.42   71.0   541.7   5.00    13.2
                       COLD   STAB   4.46   63.7   528.8   3.49    13.8
IHCL  4079PPM CARBON   HOT   TRANS   5.36   69.1   470.0   4.39    14.9
IHCG   335PPM HEXANE   HOT    STAB   4.60   75.3   506.6   2.97    13.9
ICOL  4.3 % CO
ICOG  5.4 % CO         1972    FTP   4.93   67.3   535.1   4.22    13.5
                       1975    FTP   4.91   66.7   515.2   4.05    14.0
OTHER TESTS:           HOT   START   4.97   72.3   488.7   3.66    14.4
           NONE        HFET          3.05   43.2   389.9   5.00    19.0


114   70 FORD CUST 351 COLD  TRANS  15.69  187.4   433.9   1.86    11.4
                       COLD   STAB   9.13  106.9   502.4   3.23    12.7
IHCL  5372PPM CARBON   HOT   TRANS   8.88   82.6   453.9   4.34    14.5
IHCG   300PPM HEXANE   HOT    STAB   7.79  108.5   507.2   3.37    12.6
ICOL  5.6 % CO
ICOG  6.2 % CO         1972    FTP  12.33  146.1   469.0   2.56    12.0
                       1975    FTP  10.44  117.0   474.6   3.25    12.8
OTHER TESTS:           HOT   START   8.32   95.9   481.3   3.84    13.5
           NONE        HFET          3.84   59.8   444.3   4.56    16.1


115   70 FORD LTD  390 COLD  TRANS   8.04  150.0   558.7   2.40    10.8
                       COLD   STAB   3.83   44.4   644.3   2.64    12.2
IHCL  2044PPM CARBON   HOT   TRANS   4.01   59.4   538.3   3.38    13.8
IHCG   250PPM HEXANE   HOT    STAB   3.72   49.0   617.8   2.25    12.6
ICOL  0.3 % CO
ICOG  1.5 % CO         1972    FTP   5.88   95.8   602.6   2.52    11.5
                       1975    FTP   4.76   70.7   597.0   2.80    12.3
OTHER TESTS:           HOT   START   3.86   54.1   579.1   2.80    13.1
           NONE        HFET          2.94   64.2   382.7   2.32    18.0


116   70 MERC MARQ 429 COLD  TRANS  10.44  168.2   640.6   3.86     9.5
                       COLD   STAB   5.88   81.5   670.8   4.05    10.9
IHCL  5671PPM CARBON   HOT   TRANS   5.88   89.0   577.3   5.10    12.1
IHCG   320PPM HEXANE   HOT    STAB   5.70  100.4   655.6   3.63    10.7
ICOL  5.6 % CO
ICOG  6.8 % CO         1972    FTP   8.10  123.7   656.1   3.96    10.1
                       1975    FTP   6.83  101.7   638.5   4.30    10.8
OTHER TESTS:           HOT   START   5.79   94.8   617.5   4.35    11.3
           NONE        HFET          4.76   77.7   472.0   4.75    14.6

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

LISTING OF FEDERAL TEST PROCEDURE RESULTS ON INDIVIDUAL VEHICLES IN DENVER

VEH NO.	YR MAKE MODL CID	TEST	TYPE	-----GRAMS PER MILE----- HC	CO	CO2	NOXC	MPG FUEL ECON
117	70 OLDS CUTL 350	COLD	TRANS	9.76	175.4	481.6	1.77	11.3
		COLD	STAB	4.68	83.2	575.8	2.68	12.3
IHCL	2885PPM CARBON	HOT	TRANS	5.62	116.6	470.1	2.33	13.2
IHCG	130PPM HEXANE	HOT	STAB	4.44	83.1	555.2	2.37	12.7
ICOL	2.2 % CO							
ICOG	1.5 % CO	1972	FTP	7.15	128.1	530.0	2.24	11.8
		1975	FTP	6.00	111.8	526.8	2.39	12.3
OTHER TESTS:		HOT	START	5.01	99.4	513.8	2.35	12.9
	NONE	HFET		3.35	61.1	380.7	3.34	18.2
118	70 OLDS TORO 455	COLD	TRANS	3.88	62.4	710.0	6.18	10.8
		COLD	STAB	3.42	67.1	749.2	3.24	10.3
IHCL	1890PPM CARBON	HOT	TRANS	3.91	55.1	630.1	5.32	12.2
IHCG	150PPM HEXANE	HOT	STAB	3.40	73.4	774.7	3.47	9.9
ICOL	1.8 % CO							
ICOG	1.9 % CO	1972	FTP	3.64	64.8	730.1	4.67	10.5
		1975	FTP	3.65	62.8	708.0	4.43	10.8
OTHER TESTS:		HOT	START	3.65	64.5	704.3	4.37	10.9
	NONE	HFET		2.63	53.2	534.3	6.22	14.2
119	70 PLYM FURY 318	COLD	TRANS	9.32	190.2	592.9	2.58	9.6
		COLD	STAB	7.94	158.3	523.5	2.36	11.1
IHCL	9939PPM CARBON	HOT	TRANS	8.02	173.0	503.6	2.53	11.1
IHCG	540PPM HEXANE	HOT	STAB	8.41	181.0	489.2	1.66	11.1
ICOL	5.6 % CO							
ICOG	6.2 % CO	1972	FTP	8.61	173.8	557.3	2.47	10.3
		1975	FTP	8.25	169.0	532.5	2.45	10.8
OTHER TESTS:		HOT	START	8.22	177.1	496.2	2.08	11.1
	NONE	HFET		5.71	160.2	453.6	2.12	12.3
120	70 PLYM FURY 318	COLD	TRANS	6.61	151.9	611.0	2.33	10.2
		COLD	STAB	5.00	116.0	532.1	1.44	12.2
IHCL	3558PPM CARBON	HOT	TRANS	5.47	147.4	407.4	1.64	13.5
IHCG	170PPM HEXANE	HOT	STAB	5.45	147.1	493.9	1.25	12.0
ICOL	3.6 % CO							
ICOG	1.8 % CO	1972	FTP	5.78	133.5	570.5	1.87	11.1
		1975	FTP	5.47	132.2	514.0	1.68	12.0
OTHER TESTS:		HOT	START	5.46	147.2	451.8	1.44	12.7
	NONE	HFET		3.99	119.8	343.1	1.52	16.3

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN DENVER

```
                                                                     MPG
VEH                                   -----GRAMS PER MILE-----       FUEL
NO.   YR MAKE MODL CID TEST   TYPE     HC     CO     CO2    NOXC     ECON
--------------------------------------------------------------------------
121   70 PONT LEMA 350 COLD  TRANS  11.46  186.8   514.3   2.12    10.5
                      .COLD   STAB   7.66  114.8   548.8   3.06    11.8
IHCL   9939PPM CARBON  HOT   TRANS   7.08  124.6   477.5   3.18    12.8
IHCG    360PPM HEXANE  HOT    STAB   7.51  123.6   499.6   2.56    12.4
ICOL   5.6 % CO
ICOG   3.4 % CO        1972    FTP   9.51  149.8   532.0   2.60    11.1
                       1975    FTP   8.29  132.6   521.8   2.90    11.7
OTHER TESTS:           HOT   START   7.30  124.1   488.9   2.86    12.6
        NONE           HFET          4.35   58.7   420.6   4.74    16.9


122   70 PONT STAR 400 COLD  TRANS   8.02  119.0   716.8   4.71     9.6
                       COLD   STAB   5.09  113.1   734.9   3.51     9.6
IHCL   2676PPM CARBON  HOT   TRANS   4.10   76.8   624.4   5.60    11.7
IHCG    160PPM HEXANE  HOT    STAB   4.63   91.0   704.5   3.86    10.3
ICOL   3.6 % CO
ICOG   3.4 % CO        1972    FTP   6.51  116.0   726.1   4.09     9.6
                       1975    FTP   5.43  104.3   700.5   4.34    10.1
OTHER TESTS:           HOT   START   4.37   84.1   665.5   4.71    10.9
        NONE           HFET          2.40   19.6   493.0   7.38    16.7


123   70 TOYO CORO 116 COLD  TRANS   3.76   51.2   325.1   5.43    21.3
                       COLD   STAB   2.97   58.4   284.5   2.75    23.0
IHCL    846PPM CARBON  HOT   TRANS   6.17   63.2   264.4   3.00    23.2
IHCG    170PPM HEXANE  HOT    STAB   3.14   64.6   306.8   2.43    21.2
ICOL   0.1 % CO
ICOG   0.1 % CO        1972    FTP   3.35   54.9   304.3   4.05    22.1
                       1975    FTP   4.02   58.2   287.4   3.38    22.7
OTHER TESTS:           HOT   START   4.62   63.9   286.2   2.71    22.1
        NONE           HFET          1.19   32.2   243.2   4.36    29.8


124   70 VOLK SEDA  97 COLD  TRANS   5.14   74.1   267.4   2.92    22.2
                       COLD   STAB   3.82   72.0   314.0   2.47    20.2
IHCL   2474PPM CARBON  HOT   TRANS   3.03   62.6   260.0   2.68    24.1
IHCG    130PPM HEXANE  HOT    STAB   3.46   67.8   304.9   2.56    21.0
ICOL   3.1 % CO
ICOG   3.1 % CO        1972    FTP   4.46   73.0   291.3   2.69    21.1
                       1975    FTP   3.87   69.8   289.3   2.62    21.6
OTHER TESTS:           HOT   START   3.25   65.3   283.1   2.62    22.4
        NONE           HFET          1.43   38.5   219.1   3.46    31.2

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN DENVER

```
                                                                     MPG
VEH                                      -----GRAMS PER MILE-----   FUEL
NO.  YR MAKE MODL CID TEST  TYPE    HC     CO     CO2   NOXC   ECON
-----------------------------------------------------------------------
125  69 AMMO STAW 290 COLD TRANS  8.75 175.5   363.5   1.52   13.3
                      COLD  STAB  7.88 161.5   363.6   1.10   13.8
IHCL  9551PPM CARBON  HOT  TRANS  7.75 147.9   355.9   1.90   14.5
IHCG   520PPM HEXANE  HOT   STAB  8.12 157.9   372.2   1.19   13.7
ICOL  5.6 % CO
ICOG  7.8 % CO        1972   FTP  8.30 168.3   363.5   1.31   13.6
                      1975   FTP  8.03 160.7   361.4   1.41   13.9
OTHER TESTS:          HOT  START  7.94 153.0   364.2   1.54   14.1
        NONE          HFET        4.76  74.1   333.0   3.34   19.1


126  69 BUIC LESA 350 COLD TRANS 11.86 156.7   485.6   2.70   11.5
                      COLD  STAB  9.42 153.7   471.5   2.05   11.9
IHCL  9939PPM CARBON  HOT  TRANS  6.50 123.5   429.5   2.75   13.8
IHCG   380PPM HEXANE  HOT   STAB  7.96 149.7   454.3   1.81   12.4
ICOL  5.6 % CO
ICOG  4.8 % CO        1972   FTP 10.61 155.2   478.4   2.36   11.7
                      1975   FTP  9.12 146.0   462.8   2.38   12.3
OTHER TESTS:          HOT  START  7.25 137.0   442.3   2.27   13.0
        NONE          HFET        3.39  60.4   364.3   3.52   18.9


127  69 CHEV C10  250 COLD TRANS 11.11 120.7   515.7   5.16   12.0
                      COLD  STAB  3.77  41.5   547.3   3.86   14.2
IHCL   712PPM CARBON  HOT  TRANS  3.51  39.9   484.4   5.44   15.9
IHCG    65PPM HEXANE  HOT   STAB  4.14  47.9   525.2   3.61   14.5
ICOL  1.1 % CO
ICOG  1.4 % CO        1972   FTP  7.34  80.0   531.9   4.50   13.0
                      1975   FTP  5.23  57.6   523.2   4.57   14.1
OTHER TESTS:          HOT  START  3.83  44.0   505.3   4.50   15.1
        NONE          HFET        1.24  17.5   423.0   6.89   19.5


128  69 CHEV MALI 307 COLD TRANS  9.07 131.7   505.5   4.26   12.0
                      COLD  STAB  8.73 126.4   472.3   3.36   12.7
IHCL  9939PPM CARBON  HOT  TRANS  7.03 116.9   421.8   3.20   14.1
IHCG   560PPM HEXANE .HOT   STAB  8.94 136.4   455.4   2.83   12.7
ICOL  8.7 % CO
ICOG  8.6 % CO        1972   FTP  8.89 129.0   488.4   3.80   12.3
                      1975   FTP  8.33 124.9   465.2   3.50   12.9
OTHER TESTS:          HOT  START  8.01 126.9   439.0   3.01   13.4
        NONE          HFET        4.33  67.8   354.1   3.78   18.7

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS ON INDIVIDUAL VEHICLES IN DENVER

```
                                                                 MPG
VEH                                  -----GRAMS PER MILE-----   FUEL
NO.  YR MAKE MODL CID TEST  TYPE    HC     CO     CO2    NOXC   ECON
-------------------------------------------------------------------
129  69 CHEV STAW 327 COLD TRANS 17.27 205.6  507.7   3.11   10.0
                      COLD  STAB  8.98 133.3  523.2   2.40   11.7
IHCL   994PPM CARBON  HOT  TRANS 11.17 161.7  434.9   2.31   12.3
IHCG   240PPM HEXANE  HOT   STAB  9.52 137.0  518.6   2.40   11.6
ICOL  0.3 % CO
ICOG  0.4 % CO        1972   FTP 13.02 168.5  515.7   2.75   10.8
                      1975   FTP 11.33 156.3  495.5   2.53   11.4
OTHER TESTS:          HOT  START 10.33 149.0  477.9   2.36   11.9
        NONE          HFET        7.43 139.6  353.5   2.38   14.9


130  69 CHEV IMPA 350 COLD TRANS  8.94 164.3  516.5   3.29   11.1
                      COLD  STAB  5.42 102.8  519.2   2.59   12.7
IHCL  4079PPM CARBON  HOT  TRANS  4.77  79.7  466.7   3.89   14.6
IHCG   350PPM HEXANE  HOT   STAB  5.26  99.8  510.6   2.39   13.0
ICOL  3.3 % CO
ICOG  3.1 % CO        1972   FTP  7.13 132.7  517.9   2.93   11.8
                      1975   FTP  5.98 109.2  504.1   3.10   12.8
OTHER TESTS:          HOT  START  5.03  90.0  489.3   3.12   13.7
        NONE          HFET        3.41  57.8  357.1   3.52   19.4


131  69 CHEV CAMA 350 COLD TRANS  9.03 168.1  511.8   2.85   11.0
                      COLD  STAB  8.17 148.0  484.5   1.47   11.9
IHCL  9939PPM CARBON  HOT  TRANS  7.76 121.8  431.4   2.60   13.7
IHCG   800PPM HEXANE  HOT   STAB  9.25 167.3  454.5   1.19   11.9
ICOL  6.6 % CO
ICOG  7.2 % CO        1972   FTP  8.59 157.8  497.7   2.14   11.5
                      1975   FTP  8.23 144.9  475.5   2.07   12.2
OTHER TESTS:          HOT  START  8.53 145.2  443.3   1.87   12.7
        NONE          HFET        4.20  76.0  364.1   2.83   17.9


132  69 CHEV STAW 427 COLD TRANS 11.69 196.1  607.0   3.62    9.3
                      COLD  STAB  8.88 118.6  629.9   2.82   10.5
IHCL  6467PPM CARBON  HOT  TRANS  7.03 113.6  534.8   4.06   12.1
IHCG   350PPM HEXANE  HOT   STAB  6.66 129.3  596.3   2.48   10.8
ICOL  5.6 % CO
ICOG  5.0 % CO        1972   FTP 10.25 156.3  618.7   3.21    9.9
                      1975   FTP  8.96 133.4  598.7   3.33   10.6
OTHER TESTS:          HOT  START  6.84 121.6  566.3   3.25   11.4
        NONE          HFET        4.48  81.8  424.8   3.54   15.6

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN DENVER

```
                                                                     MPG
VEH                                    -----GRAMS PER MILE-----     FUEL
NO.  YR MAKE MODL CID TEST  TYPE     HC     CO     CO2    NOXC     ECON
-------------------------------------------------------------------------
133  69 CHRY NEWP 383 COLD TRANS    7.76   73.8   621.6   6.14     11.6
                      COLD  STAB    5.91   99.2   584.9   5.34     11.7
IHCL  5890PPM CARBON  HOT  TRANS    5.29   63.3   544.2   6.55     13.4
IHCG   350PPM HEXANE  HOT   STAB    6.36  109.6   568.1   5.10     11.7
ICOL  5.6 % CO
ICOG  6.0 % CO        1972   FTP    6.81   86.9   602.8   5.73     11.7
                      1975   FTP    6.13   84.0   581.3   5.84     12.1
OTHER TESTS:          HOT  START    5.84   87.1   556.5   5.81     12.5
        NONE          HFET          3.37   36.2   469.7   7.22     16.5


134  69 DODG DART 225 COLD TRANS    8.93  164.7   373.7   2.21     13.4
                      COLD  STAB    3.70   70.0   392.7   3.66     17.3
IHCL  1890PPM CARBON  HOT  TRANS    3.13   62.4   370.9   4.42     18.5
IHCG   260PPM HEXANE  HOT   STAB    3.83   73.4   374.9   3.33     17.7
ICOL  0.2 % CO
ICOG  0.4 % CO        1972   FTP    6.25  116.1   383.5   2.96     15.2
                      1975   FTP    4.64   87.7   382.7   3.57     16.6
OTHER TESTS:          HOT  START    3.49   68.1   372.9   3.86     18.1
        NONE          HFET          2.50   52.8   304.6   3.54     22.4


135  69 FORD FAIR 302 COLD TRANS    6.00  109.0   560.7   1.81     11.8
                      COLD  STAB    4.03   70.4   575.7   2.36     12.7
IHCL  2785PPM CARBON  HOT  TRANS    3.87   71.7   508.2   2.21     14.0
IHCG   205PPM HEXANE  HOT   STAB    3.85   66.8   567.7   2.24     13.0
ICOL  2.3 % CO
ICOG  2.1 % CO        1972   FTP    4.99   89.2   568.4   2.09     12.3
                      1975   FTP    4.40   78.8   553.8   2.20     12.8
OTHER TESTS:          HOT  START    3.86   69.2   538.7   2.23     13.5
        NONE          HFET          2.15   35.0   412.3   2.17     18.7


136  69 FORD MUST 302 COLD TRANS    6.69   68.5   475.3   6.80     14.7
                      COLD  STAB    4.32   68.5   397.2   4.83     17.1
IHCL  3765PPM CARBON  HOT  TRANS    3.61   34.7   391.4   7.14     19.4
IHCG   320PPM HEXANE  HOT   STAB    4.17   67.5   396.8   4.78     17.2
ICOL  4.4 % CO
ICOG  3.5 % CO        1972   FTP    5.48   68.5   435.2   5.79     15.8
                      1975   FTP    4.62   59.1   411.9   5.88     17.1
OTHER TESTS:          HOT  START    3.90   51.5   394.2   5.93     18.2
        NONE          HFET          2.44   13.8   344.2   7.15     23.8

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

```
              LISTING OF FEDERAL TEST PROCEDURE RESULTS
                  ON INDIVIDUAL VEHICLES IN DENVER

                                                                        MPG
VEH                                     -----GRAMS PER MILE-----       FUEL
NO.  YR MAKE MODL CID TEST  TYPE     HC     CO     CO2    NOXC        ECON
----------------------------------------------------------------------------
137  69 FORD TORI 351 COLD TRANS   7.36   69.1   547.9   6.42        13.1
                      COLD  STAB   7.21   75.8   513.2   5.16        13.5
IHCL  4974PPM CARBON  HOT  TRANS   6.67   63.4   467.6   6.05        15.1
IHCG   280PPM HEXANE  HOT   STAB   6.81   94.2   500.0   4.52        13.3
ICOL  3.8 % CO
ICOG  3.0 % CO        1972   FTP   7.28   72.5   530.1   5.77        13.3
                      1975   FTP   7.09   70.9   507.8   5.67        13.8
OTHER TESTS:          HOT  START   6.74   79.2   484.3   5.26        14.1
          NONE        HFET         3.46   37.5   380.9   5.09        19.7


138  69 FORD TORI 351 COLD TRANS   9.47   88.6   546.1   5.52        12.4
                      COLD  STAB   6.18   63.9   551.9   5.24        13.2
IHCL  8904PPM CARBON  HOT  TRANS   8.19   58.2   482.7   6.06        14.8
IHCG   360PPM HEXANE  HOT   STAB   5.91   66.6   526.1   4.54        13.7
ICOL  5.6 % CO
ICOG  3.0 % CO        1972   FTP   7.78   75.9   549.1   5.38        12.8
                      1975   FTP   7.42   67.5   531.5   5.53        13.4
OTHER TESTS:          HOT  START   7.02   62.5   505.0   5.28        14.2
          NONE        HFET         3.52   29.2   397.2   6.24        19.5


139  69 FORD GALA 390 COLD TRANS   8.00   98.2   615.2   6.83        11.2
                      COLD  STAB   5.46   76.7   585.8   6.25        12.3
IHCL  4278PPM CARBON  HOT  TRANS   5.59   56.8   557.9   7.53        13.4
IHCG   200PPM HEXANE  HOT   STAB   5.22   77.9   582.3   5.75        12.3
ICOL  4.8 % CO
ICOG  3.0 % CO        1972   FTP   6.70   87.2   600.2   6.53        11.7
                      1975   FTP   6.03   75.7   584.2   6.73        12.3
OTHER TESTS:          HOT  START   5.40   67.6   570.4   6.62        12.8
          NONE        HFET         3.64   31.7   489.7   8.17        16.1


140  69 MERC MONT 390 COLD TRANS   9.33  102.9   536.4   6.46        12.2
                      COLD  STAB   7.39  136.9   563.5   5.35        11.1
IHCL  6069PPM CARBON  HOT  TRANS   6.44  102.2   531.6   6.87        12.5
IHCG   300PPM HEXANE  HOT   STAB   6.79  132.6   558.2   5.14        11.3
ICOL  5.6 % CO
ICOG  4.2 % CO        1972   FTP   8.33  120.4   550.3   5.89        11.6
                      1975   FTP   7.53  120.2   549.0   6.01        11.7
OTHER TESTS:          HOT  START   6.62  117.8   545.3   5.98        11.8
          NONE        HFET         3.86   53.3   435.2   7.20        16.7

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C, CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN DENVER

```
                                                                  MPG
VEH                                    -----GRAMS PER MILE-----   FUEL
NO.  YR MAKE MODL CID TEST  TYPE    HC    CO     CO2    NOXC    ECON
----------------------------------------------------------------------
141  69 OLDS 98   455 COLD TRANS  7.32 192.2   631.1   2.26     9.3
                      COLD  STAB  5.73 112.3   601.2   2.80    11.2
IHCL  616PPM CARBON   HOT  TRANS  5.75 120.9   549.1   3.23    11.7
IHCG   340PPM HEXANE  HOT   STAB  5.46 101.0   621.1   3.00    11.1
ICOL  5.5 % CO
ICOG  5.5 % CO        1972   FTP  6.50 151.2   615.7   2.54    10.2
                      1975   FTP  6.07 131.4   593.0   2.81    10.8
OTHER TESTS:          HOT  START  5.60 110.7   586.1   3.11    11.4
        NONE          HFET        3.36  60.2   459.2   3.95    15.7


142  69 PLYM FURY 318 COLD TRANS  2.36  24.5   485.2   4.37    16.7
                      COLD  STAB  3.44  33.1   555.8   3.94    14.3
IHCL  1890PPM CARBON  HOT  TRANS  3.42  48.2   515.4   5.25    14.7
IHCG   120PPM HEXANE  HOT   STAB  3.77  45.3   585.8   4.48    13.3
ICOL  0.4 % CO
ICOG  0.3 % CO        1972   FTP  2.92  28.9   521.4   4.15    15.4
                      1975   FTP  3.21  35.5   529.8   4.40    14.9
OTHER TESTS:          HOT  START  3.60  46.7   551.5   4.86    13.9
        NONE          HFET        2.91  48.0   393.2   5.05    18.6


143  69 PONT FIRE 350 COLD TRANS 18.24 215.0   623.9   2.39     8.7
                      COLD  STAB 11.20 160.9   563.6   1.72    10.4
IHCL  8755PPM CARBON  HOT  TRANS  9.08 155.0   432.9   1.80    12.6
IHCG   385PPM HEXANE  HOT   STAB 11.22 165.4   540.1   1.57    10.6
ICOL  5.4 % CO
ICOG  5.2 % CO        1972   FTP 14.63 187.2   593.0   2.05     9.5
                      1975   FTP 12.09 170.6   540.0   1.88    10.5
OTHER TESTS:          HOT  START 10.18 160.4   487.9   1.68    11.5
        NONE          HFET        4.45  92.3   357.3   2.16    17.2


144  69 PONT GTO  400 COLD TRANS  8.71  90.9   617.3   4.09    11.3
                      COLD  STAB  7.19 113.1   596.5   2.85    11.1
IHCL  3979PPM CARBON  HOT  TRANS  6.53  73.6   587.8   5.05    12.3
IHCG   200PPM HEXANE  HOT   STAB  5.96  70.5   612.4   3.74    12.0
ICOL  2.3 % CO
ICOG  1.4 % CO        1972   FTP  7.93 102.3   606.6   3.45    11.2
                      1975   FTP  7.33  97.5   598.5   3.72    11.5
OTHER TESTS:          HOT  START  6.24  72.0   600.4   4.38    12.1
        NONE          HFET        3.72  20.4   496.0   6.90    16.4

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS ON INDIVIDUAL VEHICLES IN DENVER

```
                                                                  MPG
VEH                                   -----GRAMS PER MILE-----   FUEL
NO.  YR MAKE MODL CID TEST  TYPE     HC     CO     CO2   NOXC   ECON
-----------------------------------------------------------------------
145  69 VOLK SEDA  91 COLD TRANS   8.76   97.4   253.7   1.83   20.4
                      COLD  STAB   6.85   86.7   289.1   1.78   19.9
IHCL  5372PPM CARBON  HOT  TRANS   5.03   72.7   252.4   1.95   23.2
IHCG   230PPM HEXANE  HOT   STAB   7.88   93.5   285.8   1.52   19.4
ICOL  3.8 % CO
ICOG  2.4 % CO        1972   FTP   7.78   91.9   271.9   1.80   20.1
                      1975   FTP   6.74   85.0   271.5   1.84   20.8
OTHER TESTS:          HOT  START   6.49   83.4   269.5   1.73   21.1
         NONE         HFET         2.03   55.3   219.5   2.14   28.4


146  68 AMMO JAVE 232 COLD TRANS   6.62   95.5   411.3   2.93   15.2
                      COLD  STAB   4.43  102.0   336.1   1.55   17.4
IHCL  4367PPM CARBON  HOT  TRANS   3.49   58.1   314.8   3.43   21.3
IHCG   215PPM HEXANE  HOT   STAB   4.20   98.0   333.1   1.62   17.7
ICOL  4.2 % CO
ICOG  4.1 % CO        1972   FTP   5.50   98.9   372.7   2.22   16.3
                      1975   FTP   4.63   88.5   345.9   2.36   17.8
OTHER TESTS:          HOT  START   3.85   78.6   324.2   2.50   19.3
         NONE         HFET         1.65   16.4   299.8   4.76   26.8


147  68 BUIC RIVE 430 COLD TRANS   5.91  122.7   367.1   2.42   15.3
                      COLD  STAB   4.24   79.3   340.5   1.86   18.5
IHCL  2043PPM CARBON  HOT  TRANS   3.32   46.1   323.1   3.73   21.9
IHCG   240PPM HEXANE  HOT   STAB   3.98   64.0   335.7   2.02   19.8
ICOL  0.5 % CO
ICOG  1.6 % CO        1972   FTP   5.05  100.4   353.4   2.13   16.8
                      1975   FTP   4.33   79.2   341.2   2.50   18.5
OTHER TESTS:          HOT  START   3.66   55.3   329.6   2.85   20.7
         NONE         HFET         2.69   46.5   259.2   3.23   26.0


148  68 CADI DEVI 472 COLD TRANS   7.91  168.2   750.8   2.02    8.5
                      COLD  STAB   5.61  139.3   729.8   2.77    9.2
IHCL  1940PPM CARBON  HOT  TRANS   5.47  151.9   570.1   2.77   10.7
IHCG   100PPM HEXANE  HOT   STAB   5.07  122.2   689.1   2.82    9.9
ICOL  1.5 % CO
ICOG  1.2 % CO        1972   FTP   6.73  153.4   740.0   2.40    8.9
                      1975   FTP   6.05  148.8   689.9   2.61    9.4
OTHER TESTS:          HOT  START   5.27  136.6   631.2   2.80   10.3
         NONE         HFET         3.23   86.9   469.8   3.72   14.4

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN DENVER

```
                                                                  MPG
VEH                                     -----GRAMS PER MILE-----  FUEL
NO.  YR MAKE MODL CID TEST  TYPE   HC    CO    CO2   NOXC  ECON
------------------------------------------------------------------------
149  68 CHEV STAW 230 COLD TRANS 17.64 203.9  447.8  1.73  10.8
                      COLD  STAB 13.62 165.9  430.1  0.73  12.1
IHCL   710PPM CARBON  HOT  TRANS 15.15 162.0  371.7  1.44  13.2
IHCG    70PPM HEXANE  HOT   STAB  9.11 154.8  395.1  0.61  13.3
ICOL  1.1 % CO
ICOG  1.3 % CO        1972   FTP 15.57 184.4  438.7  1.21  11.4
                      1975   FTP 14.88 172.8  417.6  1.13  12.1
OTHER TESTS:          HOT  START 12.05 158.3  383.7  1.01  13.2
        NONE          HFET        3.70  76.6  349.5  2.22  18.4


150  68 CHEV STAW 307 COLD TRANS 12.51  98.3  486.2  4.37  13.0
                      COLD  STAB 13.31 113.7  478.8  2.31  12.7
IHCL  6069PPM CARBON  HOT  TRANS 10.36 107.8  371.4  2.01  15.5
IHCG   500PPM HEXANE  HOT   STAB 12.76 124.1  470.8  1.80  12.6
ICOL  2.2 % CO
ICOG  1.0 % CO        1972   FTP 12.92 106.2  482.4  3.31  12.9
                      1975   FTP 12.33 108.8  450.6  2.66  13.4
OTHER TESTS:          HOT  START 11.59 116.2  422.4  1.90  13.8
        NONE          HFET        3.93  78.8  428.3  2.82  15.7


151  68 CHEV CAMA 327 COLD TRANS 10.29 103.0  483.7  4.07  13.1
                      COLD  STAB  8.14  71.7  466.0  3.65  14.7
IHCL  7959PPM CARBON  HOT  TRANS  6.69  75.9  409.0  3.55  16.2
IHCG   840PPM HEXANE  HOT   STAB 10.13 100.2  421.8  2.49  14.5
ICOL  3.3 % CO
ICOG  4.0 % CO        1972   FTP  9.19  86.9  474.6  3.86  13.9
                      1975   FTP  8.19  79.4  453.9  3.71  14.7
OTHER TESTS:          HOT  START  8.46  88.4  415.6  3.01  15.3
        NONE          HFET        4.80  65.1  323.5  3.04  20.1


152  68 CHEV IMPA 307 COLD TRANS 11.58 115.6  558.1  4.86  11.4
                      COLD  STAB  7.51  69.5  547.0  4.72  13.1
IHCL  6765PPM CARBON  HOT  TRANS  6.56  72.1  510.9  5.72  13.8
IHCG   480PPM HEXANE  HOT   STAB  7.43  62.6  539.0  4.99  13.4
ICOL  2.9 % CO
ICOG  2.0 % CO        1972   FTP  9.49  91.9  552.4  4.79  12.2
                      1975   FTP  8.10  79.9  539.3  5.03  12.9
OTHER TESTS:          HOT  START  7.01  67.2  525.3  5.34  13.6
        NONE          HFET        4.43  48.7  437.2  6.99  16.8

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

```
                LISTING OF FEDERAL TEST PROCEDURE RESULTS
                   ON INDIVIDUAL VEHICLES IN DENVER

                                                                        MPG
VEH                                     -----GRAMS PER MILE-----       FUEL
NO.  YR MAKE MODL CID TEST  TYPE    HC     CO     CO2    NOXC          ECON
---------------------------------------------------------------------------
153  68 CHEV MALI 396 COLD TRANS   6.29   32.8   717.1   3.21   11.3
                      COLD  STAB   8.52   43.2   768.7   2.23   10.3
IHCL  3382PPM CARBON  HOT  TRANS   6.87   43.7   591.2   2.79   13.0
IHCG   600PPM HEXANE  HOT   STAB   8.96   41.6   731.9   2.18   10.7
ICOL  0.1 % CO
ICOG  0.1 % CO        1972   FTP   7.44   38.1   743.6   2.71   10.7
                      1975   FTP   7.60   41.1   708.7   2.59   11.1
OTHER TESTS:          HOT  START   7.95   42.6   663.4   2.48   11.7
         NONE         HFET         1.36   23.6   474.3   2.08   17.2


154  68 DODG POLA 383 COLD TRANS   9.07  164.2   572.3   4.15   10.3
                      COLD  STAB   6.59  118.3   503.0   3.51   12.5
IHCL  4715PPM CARBON  HOT  TRANS   5.44   83.7   520.4   5.60   13.3
IHCG   140PPM HEXANE  HOT   STAB   6.31  112.2   497.5   3.71   12.8
ICOL  0.6 % CO
ICOG  1.8 % CO        1972   FTP   7.80  140.6   536.8   3.82   11.3
                      1975   FTP   6.79  118.3   522.3   4.22   12.2
OTHER TESTS:          HOT  START   5.89   98.4   508.6   4.63   13.0
         NONE         HFET         4.10   56.1   457.8   6.77   15.9


155  68 FORD MUST 200 COLD TRANS   4.62  102.6   452.1   5.76   14.1
                      COLD  STAB   3.31   31.8   455.6   5.84   17.2
IHCL  2328PPM CARBON  HOT  TRANS   3.54   47.4   398.0   6.67   18.4
IHCG   150PPM HEXANE  HOT   STAB   3.42   46.3   452.7   4.88   16.5
ICOL  0.2 % CO
ICOG  0.1 % CO        1972   FTP   3.95   66.2   453.9   5.80   15.6
                      1975   FTP   3.65   50.9   438.9   6.05   16.7
OTHER TESTS:          HOT  START   3.48   46.8   426.1   5.75   17.4
         NONE         HFET         2.35   34.3   329.8   2.08   22.7


156  68 FORD MUST 289 COLD TRANS   8.44   68.5   462.3   4.00   14.9
                      COLD  STAB   7.03   91.3   410.4   2.63   15.4
IHCL  4775PPM CARBON  HOT  TRANS   4.44   50.9   391.1   3.86   18.3
IHCG   340PPM HEXANE  HOT   STAB   5.95   82.5   406.9   2.43   16.0
ICOL  4.8 % CO
ICOG  2.8 % CO        1972   FTP   7.72   80.2   435.7   3.30   15.1
                      1975   FTP   6.61   75.3   415.9   3.26   16.0
OTHER TESTS:          HOT  START   5.21   67.1   399.2   3.13   17.0
         NONE         HFET         2.98   27.5   335.9   3.54   22.8

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS ON INDIVIDUAL VEHICLES IN DENVER

```
                                                                      MPG
VEH                                      -----GRAMS PER MILE-----     FUEL
NO.  YR MAKE MODL CID TEST  TYPE    HC     CO     CO2   NOXC     ECON
-------------------------------------------------------------------------
157  68 FORD MUST 302 COLD TRANS 14.45 128.2   384.4   1.91     14.1
                      COLD  STAB 15.54 135.2   394.6   0.87     13.5
IHCL  1492PPM CARBON  HOT  TRANS 13.49 121.9   339.6   1.63     15.5
IHCG   270PPM HEXANE  HOT   STAB 14.89 134.3   402.9   0.94     13.4
ICOL  0.6 % CO
ICOG  3.0 % CO        1972   FTP 15.01 131.8   389.6   1.38     13.8
                      1975   FTP 14.74 130.0   377.2   1.30     14.1
OTHER TESTS:          HOT  START 14.21 128.3   372.1   1.27     14.3
        NONE          HFET        4.47  55.9   305.5   3.22     21.8


158  68 FORD STAW 390 COLD TRANS  7.14 123.7   637.1   5.57     10.4
                      COLD  STAB  6.16 106.8   604.2   4.79     11.2
IHCL  4974PPM CARBON  HOT  TRANS  5.57  83.1   561.0   6.46     12.5
IHCG   370PPM HEXANE  HOT   STAB  5.92 103.3   599.3   4.61     11.4
ICOL  5.6 % CO
ICOG  6.0 % CO        1972   FTP  6.64 115.0   620.2   5.17     10.8
                      1975   FTP  6.20 103.8   599.1   5.42     11.4
OTHER TESTS:          HOT  START  5.75  93.4   580.6   5.51     11.9
        NONE          HFET        4.04  54.7   467.8   6.82     15.7


159  68 MERC COUG 302 COLD TRANS  7.67  59.6   489.7   4.30     14.6
                      COLD  STAB  5.13  43.0   512.3   3.81     14.9
IHCL  9939PPM CARBON  HOT  TRANS  5.59  60.0   432.6   4.02     16.3
IHCG   380PPM HEXANE  HOT   STAB  4.85  43.0   506.0   3.62     15.1
ICOL  5.6 % CO
ICOG  4.2 % CO        1972   FTP  6.37  51.1   501.3   4.05     14.7
                      1975   FTP  5.79  51.2   485.5   3.97     15.2
OTHER TESTS:          HOT  START  5.21  51.3   470.3   3.82     15.6
        NONE          HFET        2.71  16.6   357.9   5.61     22.6


160  68 OLDS CUTL 350 COLD TRANS  7.90 119.4   534.5   2.49     11.9
                      COLD  STAB  4.94  76.7   532.9   2.11     13.3
IHCL  5074PPM CARBON  HOT. TRANS  5.40  62.8   468.4   3.06     15.2
IHCG   360PPM HEXANE  HOT   STAB  4.66  68.0   517.9   2.07     13.9
ICOL  5.5 % CO
ICOG  5.5 % CO        1972   FTP  6.38  97.5   533.7   2.30     12.6
                      1975   FTP  5.69  81.8   515.4   2.46     13.4
OTHER TESTS:          HOT  START  5.02  65.5   493.8   2.55     14.5
        NONE          HFET        3.35  41.3   369.3   2.98     20.0

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN DENVER

```
                                                                      MPG
VEH                                 -----GRAMS PER MILE-----         FUEL
NO.  YR MAKE MODL CID TEST   TYPE    HC     CO      CO2    NOXC      ECON
--------------------------------------------------------------------------
161  68 PLYM SATE 318 COLD  TRANS 15.72  225.8    414.5    2.11      10.8
                      COLD   STAB  5.31   67.3    481.8    4.90      14.7
IHCL  9452PPM CARBON  HOT   TRANS  4.62   71.3    417.7    4.08      16.3
IHCG   520PPM HEXANE  HOT    STAB  5.64   83.8    454.7    4.06      14.7
ICOL  5.6 % CO
ICOG  4.8 % CO        1972    FTP 10.37  144.4    449.0    3.55      12.5
                      1975    FTP  7.30  101.6    449.9    4.09      14.0
OTHER TESTS:          HOT   START  5.14   77.7    436.7    4.07      15.4
          NONE        HFET         3.51   62.4    338.9    3.75      19.8


162  68 PONT GTO  400 COLD  TRANS  5.52   79.7    653.6    4.17      11.1
                      COLD   STAB  5.48  139.9    579.7    1.59      10.9
IHCL  9730PPM CARBON  HOT   TRANS  4.84   93.0    519.2    3.36      13.0
IHCG   350PPM HEXANE  HOT    STAB  5.14  121.9    588.4    1.78      11.1
ICOL  4.7 % CO
ICOG  2.4 % CO        1972    FTP  5.50  110.6    615.7    2.84      11.0
                      1975    FTP  5.31  114.3    578.4    2.62      11.5
OTHER TESTS:          HOT   START  4.99  107.9    554.7    2.55      12.0
          NONE        HFET         2.70   45.6    454.1    4.27      16.6


163  68 VOLK SEDA  91 COLD  TRANS  8.75  113.2    246.2    2.18      19.6
                      COLD   STAB 10.65  134.2    262.2    1.52      17.5
IHCL  9939PPM CARBON  HOT   TRANS  7.82  100.4    233.1    1.92      21.4
IHCG   620PPM HEXANE  HOT    STAB 10.44  132.3    250.2    1.32      18.1
ICOL  5.6 % CO
ICOG  7.8 % CO        1972    FTP  9.73  124.0    254.4    1.84      18.5
                      1975    FTP  9.47  120.4    250.8    1.77      18.9
OTHER TESTS:          HOT   START  9.17  116.8    241.9    1.61      19.5
          NONE        HFET         2.46   54.3    209.6    2.58      29.3


164  67 AMMO RAMB 232 COLD  TRANS  9.27  134.7    362.2    2.17      14.7
                      COLD   STAB  4.91  127.1    348.7    1.22      15.7
IHCL  4168PPM CARBON  HOT   TRANS  4.50  114.2    322.2    1.92      17.2
IHCG   190PPM HEXANE  HOT    STAB  5.23  132.0    337.8    0.99      15.8
ICOL  5.4 % CO
ICOG  2.8 % CO        1972    FTP  7.03  130.8    355.3    1.68      15.2
                      1975    FTP  5.71  125.1    344.2    1.61      15.9
OTHER TESTS:          HOT   START  4.87  123.4    330.2    1.44      16.5
          NONE        HFET         3.23   80.9    276.4    2.47      21.4

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

```
              LISTING OF FEDERAL TEST PROCEDURE RESULTS
                 ON INDIVIDUAL VEHICLES IN DENVER

VEH                                                                MPG
                                         -----GRAMS PER MILE-----  FUEL
NO.  YR MAKE MODL CID TEST  TYPE    HC    CO     CO2    NOXC   ECON
--------------------------------------------------------------------
165  67 BUIC SPEC 340 COLD TRANS  9.55 217.6   398.3   0.63   11.5
                      COLD  STAB  9.24 247.1   390.1   0.27   11.0
IHCL  4755PPM CARBON  HOT  TRANS  8.22 220.8   355.9   0.56   12.2
IHCG  1200PPM HEXANE  HOT   STAB  9.07 259.8   394.7   0.29   10.7
ICOL  4.9 % CO
ICOG  4.5 % CO        1972   FTP  9.39 232.7   394.1   0.45   11.2
                      1975   FTP  9.02 233.6   382.3   0.43   11.4
OTHER TESTS:          HOT  START  8.65 240.8   375.8   0.42   11.4
        NONE          HFET        5.17 156.0   275.4   0.62   16.5


166  67 CADI FLEE 429 COLD TRANS 10.90 270.9   688.5   1.60    7.7
                      COLD  STAB  7.77 147.4   732.6   2.02    9.0
IHCL  2785PPM CARBON  HOT  TRANS 13.80 155.9   598.0   2.10   10.0
IHCG   260PPM HEXANE  HOT   STAB  8.59 141.4   700.0   1.92    9.3
ICOL  0.8 % CO
ICOG  1.0 % CO        1972   FTP  9.29 207.5   711.1   1.82    8.3
                      1975   FTP 10.10 175.6   686.0   1.95    8.9
OTHER TESTS:          HOT  START 11.12 148.5   650.3   2.01    9.7
        NONE          HFET       13.18 127.3   479.1   2.75   12.3


167  67 CHEV IMPA 250 COLD TRANS 15.13 192.6   366.2   1.69   12.4
                      COLD  STAB 11.80 159.9   384.3   1.66   13.2
IHCL  2104PPM CARBON  HOT  TRANS 10.79 181.4   329.8   1.42   13.7
IHCG    30PPM HEXANE  HOT   STAB 11.94 161.5   373.5   1.59   13.3
ICOL  0.4 % CO
ICOG  0.5 % CO        1972   FTP 13.42 175.8   375.5   1.68   12.8
                      1975   FTP 12.22 172.7   365.4   1.60   13.1
OTHER TESTS:          HOT  START 11.38 171.2   352.2   1.51   13.5
        NONE          HFET        4.99 121.0   304.7   2.61   17.4


168  67 CHEV IMPA 283 COLD TRANS 16.45 183.5   439.1   1.85   11.4
                      COLD  STAB 14.62 218.7   424.7   0.83   10.9
IHCL  9939PPM CARBON  HOT  TRANS 12.10 174.2   370.8   1.39   13.0
IHCG   520PPM HEXANE  HOT   STAB 13.26 207.7   397.3   0.78   11.6
ICOL  5.6 % CO
ICOG  6.8 % CO        1972   FTP 15.51 201.6   431.7   1.33   11.1
                      1975   FTP 14.30 199.0   412.8   1.20   11.5
OTHER TESTS:          HOT  START 12.70 191.4   384.4   1.07   12.2
        NONE          HFET        6.40  93.2   332.1   2.58   17.8

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN DENVER

```
                                                             MPG
VEH                               -----GRAMS PER MILE-----  FUEL
NO.  YR MAKE MODL CID TEST  TYPE    HC    CO    CO2   NOXC  ECON
-----------------------------------------------------------------
169  67 CHEV MALI 283 COLD TRANS 16.57 134.8  458.7  2.92  12.3
                      COLD  STAB 18.18 143.6  416.7  1.68  12.7
IHCL  9939PPM CARBON  HOT  TRANS 12.73 112.8  388.4  2.45  14.6
IHCG  1000PPM HEXANE  HOT   STAB 17.12 143.7  404.6  1.51  13.0
ICOL  5.6 % CO
ICOG  7.6 % CO        1972   FTP 17.40 139.3  437.1  2.28  12.5
                      1975   FTP 16.33 133.2  417.6  2.15  13.1
OTHER TESTS:          HOT  START 14.98 128.7  396.7  1.97  13.7
          NONE        HFET        6.75  71.1  294.5  2.44  20.8


170  67 CHEV IMPA 327 COLD TRANS 10.87 170.8  467.1  2.76  11.5
                      COLD  STAB  7.89 141.3  465.5  2.00  12.5
IHCL  5870PPM CARBON  HOT  TRANS  5.99 113.4  376.4  2.28  15.5
IHCG   480PPM HEXANE  HOT   STAB  7.99 144.3  464.0  1.80  12.4
ICOL  4.9 % CO
ICOG  5.8 % CO        1972   FTP  9.34 155.7  466.3  2.37  12.0
                      1975   FTP  7.99 139.7  441.1  2.23  12.9
OTHER TESTS:          HOT  START  7.02 129.3  421.4  2.03  13.7
          NONE        HFET        4.73  95.8  369.2  2.98  16.6


171  67 CHRY NEWP 383 COLD TRANS 30.48 330.0  522.5  1.06   7.8
                      COLD  STAB  8.35 125.6  562.6  2.79  11.3
IHCL  6377PPM CARBON  HOT  TRANS  8.52 159.7  492.8  2.68  11.5
IHCG   380PPM HEXANE  HOT   STAB  8.58 135.8  544.0  2.37  11.3
ICOL  5.6 % CO
ICOG  6.8 % CO        1972   FTP 19.12 225.1  543.1  1.95   9.3
                      1975   FTP 13.03 177.9  534.8  2.40  10.4
OTHER TESTS:          HOT  START  8.55 147.5  519.1  2.52  11.4
          NONE        HFET        6.36 118.3  409.2  2.73  14.4


172  67 DODG CORO 318 COLD TRANS 15.75 181.8  426.5  1.87  11.6
                      COLD  STAB  8.80 148.7  416.1  1.29  13.1
IHCL  6616PPM CARBON  HOT  TRANS  8.62 129.8  382.9  1.88  14.4
IHCG   460PPM HEXANE  HOT   STAB  8.87 155.9  402.2  1.19  13.1
ICOL  5.3 % CO
ICOG  4.2 % CO        1972   FTP 12.18 164.8  421.2  1.57  12.3
                      1975   FTP 10.20 150.4  409.1  1.57  13.1
OTHER TESTS:          HOT  START  8.75 143.2  392.8  1.52  13.7
          NONE        HFET        4.92  94.5  332.4  2.38  17.9

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

```
              LISTING OF FEDERAL TEST PROCEDURE RESULTS
                  ON INDIVIDUAL VEHICLES IN DENVER

                                                                   MPG
VEH                                   -----GRAMS PER MILE-----    FUEL
NO.   YR MAKE MODL CID TEST   TYPE     HC     CO      CO2   NOXC  ECON
----------------------------------------------------------------------
173   67 FORD CUST 289 COLD  TRANS   8.67  110.7   471.7   2.87   13.2
                       COLD   STAB   8.48  137.7   430.3   1.32   13.2
IHCL   4576PPM CARBON  HOT   TRANS   6.94  117.4   369.8   1.77   15.4
IHCG    300PPM HEXANE  HOT    STAB   8.20  144.7   423.3   1.20   13.1
ICOL   4.6 % CO
ICOG   5.0 % CO        1972    FTP   8.57  124.6   450.5   2.07   13.2
                       1975    FTP   8.09  126.4   422.2   1.77   13.7
OTHER TESTS:           HOT   START   7.59  131.5   397.3   1.48   14.1
          NONE         HFET          3.59   75.9   318.7   2.40   19.8


174   67 FORD MUST 289 COLD  TRANS   9.10  130.3   389.1   2.42   14.3
                       COLD   STAB  11.07  176.9   350.1   1.11   13.4
IHCL   9939PPM CARBON  HOT   TRANS   8.30  132.0   327.3   1.65   15.8
IHCG    640PPM HEXANE  HOT    STAB  11.05  183.7   336.4   0.83   13.4
ICOL   8.0 % CO
ICOG   7.8 % CO        1972    FTP  10.11  154.2   369.1   1.75   13.8
                       1975    FTP   9.89  154.7   351.9   1.54   14.2
OTHER TESTS:           HOT   START   9.71  158.5   331.9   1.23   14.5
          NONE         HFET          4.97   98.4   275.0   1.54   19.9


175   67 FORD GALA 390 COLD  TRANS   9.08  118.0   591.3   4.76   11.0
                       COLD   STAB   5.63   67.1   597.2   4.20   12.3
IHCL   3880PPM CARBON  HOT   TRANS   6.42   83.8   545.1   5.27   12.7
IHCG    280PPM HEXANE  HOT    STAB   5.84   99.6   592.8   3.78   11.6
ICOL   2.8 % CO
ICOG   2.0 % CO        1972    FTP   7.31   91.9   594.3   4.47   11.6
                       1975    FTP   6.57   82.4   581.5   4.61   12.1
OTHER TESTS:           HOT   START   6.12   91.9   569.6   4.50   12.1
          NONE         HFET          4.63   86.9   435.5   4.35   15.1


176   67 MERC MONT 390 COLD  TRANS  11.45  144.1   620.2   6.35   10.1
                       COLD   STAB  10.24  135.1   574.7   5.30   10.8
IHCL   9939PPM CARBON  HOT   TRANS   9.98  119.4   508.8   5.64   12.2
IHCG    840PPM HEXANE  HOT    STAB   9.77  131.3   545.7   4.92   11.3
ICOL   5.6 % CO
ICOG   9.6 % CO        1972    FTP  10.83  139.5   596.8   5.81   10.4
                       1975    FTP  10.42  132.6   565.9   5.61   11.0
OTHER TESTS:           HOT   START   9.87  125.5   527.8   5.27   11.7
          NONE         HFET          5.17   74.1   443.5   6.27   15.4

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN DENVER

```
                                                                     MPG
VEH                                   -----GRAMS PER MILE-----       FUEL
NO.  YR MAKE MODL CID TEST  TYPE   HC     CO     CO2    NOXC        ECON
--------------------------------------------------------------------------
177  67 OLDS DELM 425 COLD TRANS 14.35 238.5   563.7   1.77         9.0
                      COLD  STAB 11.06 152.1   562.5   1.26        10.6
IHCL  9939PPM CARBON  HOT  TRANS  9.13 160.1   490.2   1.43        11.5
IHCG  1220PPM HEXANE  HOT   STAB 10.60 134.2   536.9   1.11        11.4
ICOL  3.2 % CO
ICOG  3.4 % CO        1972   FTP 12.66 194.1   563.1   1.51         9.8
                      1975   FTP 11.21 172.4   542.7   1.41        10.5
OTHER TESTS:          HOT  START  9.89 146.8   514.2   1.27        11.4
          NONE        HFET        5.62 111.8   383.2   1.69        15.4


178  67 PLYM VALI 225 COLD TRANS 11.65 185.2   369.0   1.40        12.7
                      COLD  STAB  7.81 136.1   432.7   1.49        13.2
IHCL  5969PPM CARBON  HOT  TRANS  6.28 120.3   387.3   2.04        14.9
IHCG   390PPM HEXANE  HOT   STAB  8.29 148.0   421.0   1.28        13.1
ICOL  4.9 % CO
ICOG  5.5 % CO        1972   FTP  9.68 160.0   401.7   1.45        13.0
                      1975   FTP  8.19 142.0   406.8   1.63        13.5
OTHER TESTS:          HOT  START  7.31 134.5   404.6   1.65        13.9
          NONE        HFET        3.95  99.1   294.2   1.48        19.2


179  67 PONT TEMP 326 COLD TRANS  8.07 124.5   498.3   4.12        12.3
                      COLD  STAB  6.69 105.5   509.0   4.24        12.8
IHCL  7342PPM CARBON  HOT  TRANS  5.90 118.7   435.0   3.92        13.9
IHCG   540PPM HEXANE  HOT   STAB  6.63 118.1   480.3   3.47        12.9
ICOL  6.3 % CO
ICOG  6.3 % CO        1972   FTP  7.36 114.7   503.8   4.18        12.5
                      1975   FTP  6.76 113.1   486.2   4.13        12.9
OTHER TESTS:          HOT  START  6.27 118.4   458.3   3.69        13.4
          NONE        HFET        4.30  87.5   341.4   3.64        18.0


180  67 VOLK SEDA  91 COLD TRANS  6.71  49.5   254.6   2.64        25.1
                      COLD  STAB  9.31  61.5   271.8   1.45        22.3
IHCL  9939PPM CARBON  HOT  TRANS  5.84  40.5   231.1   1.97        28.3
IHCG  2000PPM HEXANE  HOT   STAB  9.31  60.2   263.6   1.37        22.9
ICOL  5.6 % CO
ICOG  7.6 % CO        1972   FTP  8.04  55.7   263.4   2.03        23.6
                      1975   FTP  7.80  53.2   256.9   1.84        24.3
OTHER TESTS:          HOT  START  7.63  50.6   247.8   1.66        25.2
          NONE        HFET        1.90  17.1   216.3   2.76        35.6

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C

```
                 LISTING OF FEDERAL TEST PROCEDURE RESULTS
                    ON INDIVIDUAL VEHICLES IN HOUSTON

                                                                       MPG
VEH                                      -----GRAMS PER MILE-----     FUEL
NO.  YR MAKE MODL CID TEST  TYPE     HC     CO     CO2    NOXC    ECON
--------------------------------------------------------------------------
001  74 BUIC LESA 455 COLD TRANS   4.28   64.3   929.8   3.24     8.5
                      COLD  STAB   2.62   10.8   971.5   1.92     8.9
IHCL    759PPM CARBON HOT  TRANS   2.88   16.5   791.4   3.43    10.7
IHCG    118PPM HEXANE HOT   STAB   2.60   10.5   938.2   1.97     9.2
ICOL  0.1 % CO
ICOG  0.1 % CO        1972   FTP   3.43   36.8   951.2   2.56     8.7
                      1975   FTP   3.04   23.6   912.8   2.62     9.3
OTHER TESTS:          HOT  START   2.74   13.4   866.7   2.68     9.9
        MODAL         HFET


002  74 CHEV NOVA 350 COLD TRANS   5.51   74.6   794.6   3.08     9.5
                      COLD  STAB   3.21   90.8   780.7   1.39     9.5
IHCL 10052PPM CARBON  HOT  TRANS   2.34   69.1   660.8   2.42    11.4
IHCG    960PPM HEXANE HOT   STAB   4.14  120.5   749.0   1.19     9.3
ICOL  6.5 % CO
ICOG  7.6 % CO        1972   FTP   4.33   83.0   787.5   2.21     9.5
                      1975   FTP   3.45   81.4   750.4   2.03    10.0
OTHER TESTS:          HOT  START   3.27   95.5   706.1   1.79    10.2
        MODAL         HFET


003  74 CHEV MALI 350 COLD TRANS   2.36   40.4   801.0   2.43    10.2
                      COLD  STAB   3.23   17.3   919.3   1.67     9.3
IHCL   1083PPM CARBON HOT  TRANS   2.24   27.8   721.1   2.13    11.5
IHCG    150PPM HEXANE HOT   STAB   1.78   21.2   900.6   1.48     9.4
ICOL  0.2 % CO
ICOG  0.1 % CO        1972   FTP   2.81   28.5   861.7   2.04     9.7
                      1975   FTP   2.77   25.0   839.5   1.96    10.0
OTHER TESTS:          HOT  START   2.01   24.4   813.2   1.79    10.3
        MODAL         HFET


004  74 DODG CHAR 318 COLD TRANS   5.22   48.4   829.2   4.90     9.6
                      COLD  STAB   3.59   65.4   835.6   3.31     9.3
IHCL   4226PPM CARBON HOT  TRANS   3.54   40.7   735.3   5.40    11.0
IHCG    330PPM HEXANE HOT   STAB   3.85   73.1   804.0   2.96     9.5
ICOL  6.2 % CO
ICOG  5.0 % CO        1972   FTP   4.39   57.1   832.5   4.09     9.5
                      1975   FTP   3.92   55.0   806.4   4.22     9.8
OTHER TESTS:          HOT  START   3.70   57.3   770.6   4.15    10.2
        MODAL         HFET

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN HOUSTON

```
VEH                                                                MPG
                                     -----GRAMS PER MILE-----     FUEL
NO.  YR MAKE MODL CID TEST   TYPE    HC     CO     CO2    NOXC    ECON
-----------------------------------------------------------------------
005  74 FORD TORI 302 COLD  TRANS   3.06   33.7   772.2   3.27   10.6
                      COLD   STAB   2.15   10.3   826.5   2.39   10.4
IHCL  1324PPM CARBON  HOT   TRANS   2.57   12.7   700.4   3.23   12.2
IHCG   200PPM HEXANE  HOT    STAB   2.09   10.2   804.5   2.22   10.7
ICOL  0.1 % CO
ICOG  0.1 % CO        1972    FTP   2.59   21.7   800.1   2.82   10.5
                      1975    FTP   2.46   15.9   780.1   2.81   10.9
OTHER TESTS:          HOT   START   2.33   11.4   755.8   2.71   11.4
        MODAL         HFET


006  74 FORD CUST 351 COLD  TRANS   6.17   79.6   719.1   8.52   10.3
                      COLD   STAB   4.91   93.0   719.1   5.29   10.1
IHCL  3612PPM CARBON  HOT   TRANS   4.04   52.1   638.3   8.32   12.1
IHCG   350PPM HEXANE  HOT    STAB   4.77   91.8   722.8   5.34   10.1
ICOL  4.8 % CO
ICOG  3.8 % CO        1972    FTP   5.53   86.5   719.1   6.86   10.2
                      1975    FTP   4.93   75.8   696.7   6.80   10.6
OTHER TESTS:          HOT   START   4.41   72.5   681.7   6.79   11.0
        MODAL         HFET


007  74 OLDS DELT 350 COLD  TRANS   3.25   40.5   925.2   2.85    8.9
                      COLD   STAB   2.89   15.8   990.2   2.20    8.7
IHCL   560PPM CARBON  HOT   TRANS   3.05   30.5   813.4   2.78   10.2
IHCG   120PPM HEXANE  HOT    STAB   3.16   15.7   950.3   2.15    9.0
ICOL  0.2 % CO
ICOG  0.2 % CO        1972    FTP   3.07   27.8   958.6   2.52    8.8
                      1975    FTP   3.01   25.0   927.5   2.50    9.1
OTHER TESTS:          HOT   START   3.11   22.9   883.7   2.46    9.5
        MODAL         HFET


008  74 PLYM DUST 318 COLD  TRANS   6.88   63.4   680.4   4.29   11.1
                      COLD   STAB   3.75   95.1   706.5   2.83   10.2
IHCL  3119PPM CARBON  HOT   TRANS   4.29   44.0   621.2   4.97   12.6
IHCG   235PPM HEXANE  HOT    STAB   3.55   86.9   699.4   3.13   10.5
ICOL  6.0 % CO
ICOG  4.9 % CO        1972    FTP   5.28   79.7   693.7   3.54   10.6
                      1975    FTP   4.56   74.3   677.2   3.73   11.0
OTHER TESTS:          HOT   START   3.91   66.0   661.5   4.02   11.4
        MODAL         HFET

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

```
                         APPENDIX C.CONT'D

           LISTING OF FEDERAL TEST PROCEDURE RESULTS
               ON INDIVIDUAL VEHICLES IN HOUSTON

                                                                  MPG
VEH                                   -----GRAMS PER MILE-----   FUEL
NO.  YR MAKE MODL CID TEST   TYPE     HC     CO     CO2   NOXC   ECON
----------------------------------------------------------------------
009  74 PONT CATA 400 COLD TRANS    5.80   84.2   818.3   3.79    9.2
                      COLD  STAB    4.99  105.9   762.3   2.82    9.4
IHCL  5403PPM CARBON  HOT  TRANS    5.28   80.9   683.5   4.41   10.7
IHCG   520PPM HEXANE  HOT   STAB    6.45  154.3   707.4   2.21    9.1
ICOL  6.5 % CO
ICOG  6.0 % CO        1972   FTP    5.39   95.4   789.6   3.29    9.3
                      1975   FTP    5.24   94.5   752.2   3.46    9.7
OTHER TESTS:          HOT  START    5.88  118.6   695.8   3.28    9.9
        MODAL         HFET


010  74 VOLK SEDA  97 COLD TRANS    2.63   26.1   277.5   3.39   27.2
                      COLD  STAB    2.16   23.6   387.9   2.83   20.6
IHCL  2257PPM CARBON  HOT  TRANS    2.25   22.1   328.5   3.87   24.0
IHCG   190PPM HEXANE  HOT   STAB    1.99   20.7   378.9   2.68   21.2
ICOL  2.6 % CO
ICOG  2.3 % CO        1972   FTP    2.39   24.8   334.1   3.11   23.3
                      1975   FTP    2.28   23.7   348.3   3.24   22.6
OTHER TESTS:          HOT  START    2.12   21.4   354.4   3.26   22.5
        MODAL         HFET


011  73 AMMO GREM 258 COLD TRANS    5.11  194.4   402.8   0.59   12.3
                      COLD  STAB    4.01  190.2   448.1   0.55   11.7
IHCL  2717PPM CARBON  HOT  TRANS    3.88  166.2   371.4   0.55   13.8
IHCG   340PPM HEXANE  HOT   STAB    3.76  184.4   441.2   0.47   11.9
ICOL  5.1 % CO
ICOG  4.4 % CO        1972   FTP    4.54  192.2   426.1   0.57   12.0
                      1975   FTP    4.20  184.4   417.3   0.56   12.3
OTHER TESTS:          HOT  START    3.82  175.5   407.2   0.51   12.8
        MODAL         HFET


012  73 BUIC STAW 350 COLD TRANS    5.06   52.9   796.1   5.44    9.9
                      COLD  STAB    3.61   39.9   819.9   3.51    9.9
IHCL  1835PPM CARBON  HOT  TRANS    3.20   26.9   723.8   5.08   11.4
IHCG   290PPM HEXANE  HOT   STAB    3.25   41.5   807.1   3.59   10.1
ICOL  2.1 % CO
ICOG  2.1 % CO        1972   FTP    4.32   46.3   808.3   4.45    9.9
                      1975   FTP    3.80   39.0   788.2   4.35   10.3
OTHER TESTS:          HOT  START    3.23   34.4   766.6   4.32   10.7
        MODAL         HFET

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN HOUSTON

```
                                                                    MPG
VEH                                   -----GRAMS PER MILE-----     FUEL
NO.  YR MAKE MODL CID TEST  TYPE     HC      CO     CO2    NOXC    ECON
-------------------------------------------------------------------------
013  73 BUIC ELEC 455 COLD TRANS   4.32    46.5  1032.4    5.78     7.9
                      COLD  STAB   2.71    15.0  1042.1    4.46     8.3
IHCL    963PPM CARBON HOT  TRANS   2.79    18.2   857.5    6.67     9.9
IHCG    135PPM HEXANE HOT   STAB   2.65    13.7  1005.6    4.65     8.6
ICOL  0.6 % CO
ICOG  0.4 % CO        1972   FTP   3.49    30.4  1037.3    5.10     8.1
                      1975   FTP   3.07    22.5   988.8    5.35     8.6
OTHER TESTS:          HOT  START   2.72    15.9   933.4    5.63     9.2
       MODAL          HFET


014  73 CADI DEVI 472 COLD TRANS   4.42    75.7   977.4    3.69     8.0
                      COLD  STAB   2.21     9.2  1086.7    4.08     8.0
IHCL    455PPM CARBON HOT  TRANS   1.78    12.2   906.8    4.29     9.5
IHCG     80PPM HEXANE HOT   STAB   2.11    11.5  1003.4    3.43     8.6
ICOL  0.6 % CO
ICOG  0.5 % CO        1972   FTP   3.29    41.6  1033.5    3.89     8.0
                      1975   FTP   2.56    23.9  1013.9    4.06     8.4
OTHER TESTS:          HOT  START   1.95    11.8   956.4    3.85     9.0
       MODAL          HFET


015  73 CAPR CAPR 122 COLD TRANS   3.47    44.5   434.1    4.36    17.2
                      COLD  STAB   2.58    41.6   422.7    2.37    17.9
IHCL   6993PPM CARBON HOT  TRANS   2.40    27.6   377.7    3.98    20.7
IHCG   1000PPM HEXANE HOT   STAB   2.39    40.5   431.2    2.12    17.7
ICOL  5.3 % CO
ICOG  3.8 % CO        1972   FTP   3.01    43.0   428.2    3.34    17.6
                      1975   FTP   2.72    38.3   412.6    3.24    18.4
OTHER TESTS:          HOT  START   2.39    34.2   405.1    3.03    19.0
       MODAL          HFET


016  73 CHEV VEGA 140 COLD TRANS   6.29    88.4   432.3    2.83    15.0
                      COLD  STAB   4.75    81.3   387.9    2.42    16.7
IHCL   8553PPM CARBON HOT  TRANS   3.51    54.8   359.7    3.25    19.4
IHCG    500PPM HEXANE HOT   STAB   5.51    89.6   369.1    2.44    16.8
ICOL  6.5 % CO
ICOG  7.2 % CO        1972   FTP   5.50    84.8   409.5    2.62    15.8
                      1975   FTP   4.73    75.5   389.4    2.73    17.0
OTHER TESTS:          HOT  START   4.54    72.7   364.5    2.83    18.0
       MODAL          HFET

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS ON INDIVIDUAL VEHICLES IN HOUSTON

```
                                                                          MPG
VEH                                         -----GRAMS PER MILE-----     FUEL
NO.  YR MAKE MODL CID TEST   TYPE     HC     CO      CO2     NOXC       ECON
------------------------------------------------------------------------------
017  73 CHEV VEGA 140 COLD  TRANS    3.67   60.0    488.8    4.80       14.9
                      COLD   STAB    2.13   40.0    474.6    4.56       16.3
IHCL  2012PPM CARBON  HOT   TRANS    2.15   29.3    431.6    5.35       18.3
IHCG   205PPM HEXANE  HOT    STAB    2.00   36.7    459.3    4.35       17.0
ICOL  4.2 % CO
ICOG  2.0 % CO        1972    FTP    2.88   49.7    481.5    4.67       15.6
                      1975    FTP    2.46   41.2    465.7    4.83       16.5
OTHER TESTS:          HOT   START    2.07   33.1    445.8    4.83       17.6
         MODAL        HFET


018  73 CHEV CHEL 307 COLD  TRANS    9.03   61.3    760.7    5.67       10.0
                      COLD   STAB    6.47   27.5    778.7    4.15       10.5
IHCL  5434PPM CARBON  HOT   TRANS    6.61   37.3    620.4    5.67       12.7
IHCG   125PPM HEXANE  HOT    STAB    7.48   30.5    701.9    3.65       11.5
ICOL  1.5 % CO
ICOG  1.4 % CO        1972    FTP    7.71   43.9    769.9    4.89       10.3
                      1975    FTP    7.04   37.3    731.0    4.89       10.9
OTHER TESTS:          HOT   START    7.06   33.8    662.2    4.63       12.0
         MODAL        HFET


019  73 CHEV NOVA 307 COLD  TRANS    4.95   58.1    665.8    3.28       11.5
                      COLD   STAB    3.83   16.1    746.9    2.95       11.3
IHCL  1179PPM CARBON  HOT   TRANS    2.50   21.2    607.7    3.79       13.7
IHCG   180PPM HEXANE  HOT    STAB    2.83   17.1    733.5    2.48       11.5
ICOL  0.7 % CO
ICOG  0.5 % CO        1972    FTP    4.38   36.6    707.4    3.11       11.4
                      1975    FTP    3.70   26.3    691.3    3.25       11.9
OTHER TESTS:          HOT   START    2.67   19.1    672.3    3.12       12.5
         MODAL        HFET


020  73 CHEV MONT 350 COLD  TRANS    3.46   44.9    670.5    3.15       11.8
                      COLD   STAB    2.26   29.0    892.6    2.51        9.4
IHCL   781PPM CARBON  HOT   TRANS    2.27   31.9    694.2    3.10       11.8
IHCG   110PPM HEXANE  HOT    STAB    2.22   32.2    887.7    2.36        9.4
ICOL  1.7 % CO
ICOG  1.4 % CO        1972    FTP    2.84   36.7    784.5    2.82       10.4
                      1975    FTP    2.51   33.1    791.1    2.81       10.4
OTHER TESTS:          HOT   START    2.24   32.0    793.5    2.72       10.4
         MODAL        HFET

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN HOUSTON

```
                                                                        MPG
VEH                                      -----GRAMS PER MILE-----      FUEL
NO.  YR MAKE MODL CID TEST  TYPE    HC     CO      CO2    NOXC      ECON
-------------------------------------------------------------------------
021   73 CHEV CAMA 350 COLD TRANS  1.92   11.6   639.5   3.18     13.4
                       COLD  STAB  1.46   16.0   725.0   1.54     11.8
IHCL    635PPM CARBON  HOT  TRANS  1.60   11.0   637.7   3.17     13.4
IHCG    110PPM HEXANE  HOT   STAB  1.45   21.2   722.6   1.39     11.7
ICOL  0.4 % CO
ICOG  0.4 % CO         1972   FTP  1.68   13.9   683.4   2.34     12.5
                       1975   FTP  1.59   13.7   682.9   2.34     12.5
OTHER TESTS:           HOT  START  1.52   16.3   681.3   2.26     12.5
   MODAL,A/C           HFET


022   73 CHEV MALI 350 COLD TRANS  3.20   21.8   685.3   5.24     12.2
                       COLD  STAB  2.51   32.1   656.1   3.09     12.4
IHCL  1694PPM CARBON   HOT  TRANS  2.45   18.7   586.5   5.16     14.2
IHCG    165PPM HEXANE  HOT   STAB  2.47   36.2   623.0   2.78     12.9
ICOL  1.5 % CO
ICOG  0.9 % CO         1972   FTP  2.85   27.1   670.4   4.14     12.3
                       1975   FTP  2.64   26.2   642.9   4.11     12.8
OTHER TESTS:           HOT  START  2.46   27.6   605.2   3.93     13.5
        MODAL          HFET


023   73 CHEV CAPR 400 COLD TRANS  3.85   51.8   866.0   3.53      9.2
                       COLD  STAB  1.73   37.5   905.6   2.22      9.2
IHCL    930PPM CARBON  HOT  TRANS  2.07   28.1   760.5   4.77     10.9
IHCG    145PPM HEXANE  HOT   STAB  1.79   35.5   862.6   3.26      9.6
ICOL  2.1 % CO
ICOG  1.7 % CO         1972   FTP  2.76   44.4   886.3   2.86      9.2
                       1975   FTP  2.27   37.9   857.0   3.20      9.6
OTHER TESTS:           HOT  START  1.93   31.9   812.9   3.99     10.2
        MODAL          HFET


024   73 CHRY NEWP 400 COLD TRANS  4.27   73.7   898.5   4.61      8.6
                       COLD  STAB  2.96   57.0   958.2   4.71      8.4
IHCL  2287PPM CARBON   HOT  TRANS  2.42   42.5   781.5   4.44     10.4
IHCG    170PPM HEXANE  HOT   STAB  3.02   62.1   902.1   4.78      8.8
ICOL  4.0 % CO
ICOG  1.8 % CO         1972   FTP  3.59   65.1   929.1   4.66      8.5
                       1975   FTP  3.08   56.5   896.7   4.62      8.9
OTHER TESTS:           HOT  START  2.73   52.6   843.4   4.62      9.5
        MODAL          HFET

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

```
                         APPENDIX C,CONT'D

            LISTING OF FEDERAL TEST PROCEDURE RESULTS
                ON INDIVIDUAL VEHICLES IN HOUSTON

                                                                  MPG
                                       -----GRAMS PER MILE-----  FUEL
VEH
NO.  YR MAKE MODL CID TEST  TYPE     HC     CO     CO2    NOXC  ECON
-----------------------------------------------------------------------
025  73 DATS DELU  71 COLD TRANS   4.99   79.3   374.1   4.22  17.2
                      COLD  STAB   3.34   55.8   353.6   3.56  19.6
IHCL  7245PPM CARBON  HOT  TRANS   5.59   52.3   340.7   4.48  20.1
IHCG   520PPM HEXANE  HOT   STAB   2.81   49.5   335.2   3.38  21.0
ICOL  5.1 % CO
ICOG  4.4 % CO        1972   FTP   4.14   67.2   363.6   3.88  18.4
                      1975   FTP   4.31   59.7   354.3   3.95  19.2
OTHER TESTS:          HOT  START   4.16   50.8   337.9   3.92  20.6
        MODAL         HFET


026  73 DODG DART 225 COLD TRANS   5.34   89.1   715.8   5.23  10.2
                      COLD  STAB   2.82   59.5   631.8   4.58  12.1
IHCL   601PPM CARBON  HOT  TRANS   2.68   48.0   545.3   5.71  14.1
IHCG    70PPM HEXANE  HOT   STAB   2.42   47.1   617.9   4.49  12.7
ICOL  0.3 % CO
ICOG  0.4 % CO        1972   FTP   4.05   73.9   672.7   4.89  11.1
                      1975   FTP   3.31   62.5   625.4   5.03  12.1
OTHER TESTS:          HOT  START   2.55   47.5   582.6   5.09  13.3
        MODAL         HFET


027  73 DODG CHAR 318 COLD TRANS   5.65  101.3   682.9   3.45  10.3
                      COLD  STAB   3.46   77.3   696.7   2.58  10.7
IHCL  2314PPM CARBON  HOT  TRANS   2.89   48.0   605.3   3.90  12.9
IHCG   365PPM HEXANE  HOT   STAB   3.21   71.6   678.2   2.57  11.1
ICOL  4.0 % CO
ICOG  3.3 % CO        1972   FTP   4.53   88.9   690.0   3.00  10.5
                      1975   FTP   3.76   74.2   668.5   3.12  11.1
OTHER TESTS:          HOT  START   3.05   60.1   642.7   3.22  11.9
   MODAL,A/C          HFET


028  73 FORD STAW 122 COLD TRANS   6.05   62.7   400.1   3.27  17.1
                      COLD  STAB   2.86   56.8   437.2   2.92  16.6
IHCL  3220PPM CARBON  HOT  TRANS   3.21   42.1   387.6   3.95  19.1
IHCG   340PPM HEXANE  HOT   STAB   3.02   55.6   444.8   2.91  16.4
ICOL  5.1 % CO
ICOG  4.4 % CO        1972   FTP   4.42   59.6   419.1   3.09  16.8
                      1975   FTP   3.63   53.9   415.7   3.28  17.3
OTHER TESTS:          HOT  START   3.11   49.0   417.0   3.42  17.6
        MODAL         HFET

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS ON INDIVIDUAL VEHICLES IN HOUSTON

VEH				-----GRAMS PER MILE-----				MPG FUEL
NO.	YR MAKE MODL CID	TEST	TYPE	HC	CO	CO2	NOXC	ECON
029	73 FORD MAVE 200	COLD	TRANS	6.54	69.9	527.2	3.82	13.5
		COLD	STAB	3.57	64.7	534.8	2.34	13.7
IHCL	1956PPM CARBON	HOT	TRANS	2.86	40.5	461.0	3.73	16.6
IHCG	130PPM HEXANE	HOT	STAB	3.18	59.1	539.3	2.07	13.8
ICOL	2.1 % CO							
ICOG	2.1 % CO	1972	FTP	5.01	67.2	531.1	3.06	13.6
		1975	FTP	3.99	59.1	512.7	3.04	14.4
OTHER TESTS:		HOT	START	3.02	50.0	501.2	2.88	15.1
	MODAL	HFET						
030	73 FORD MAVE 302	COLD	TRANS	6.76	85.7	673.5	4.14	10.7
		COLD	STAB	5.72	118.7	685.1	1.62	10.0
IHCL	10052PPM CARBON	HOT	TRANS	4.98	67.3	608.3	2.95	12.2
IHCG	700PPM HEXANE	HOT	STAB	6.61	130.8	639.1	1.48	10.3
ICOL	6.5 % CO							
ICOG	7.0 % CO	1972	FTP	6.23	102.7	679.5	2.85	10.3
		1975	FTP	5.73	97.6	661.4	2.52	10.7
OTHER TESTS:		HOT	START	5.82	99.9	624.1	2.19	11.1
	MODAL	HFET						
031	73 FORD MUST 351	COLD	TRANS	6.97	145.9	550.4	1.48	11.1
		COLD	STAB	5.35	132.7	602.3	1.70	10.7
IHCL	2193PPM CARBON	HOT	TRANS	4.82	117.8	498.5	1.65	12.7
IHCG	350PPM HEXANE	HOT	STAB	5.34	134.6	587.3	1.62	10.9
ICOL	3.9 % CO							
ICOG	3.1 % CO	1972	FTP	6.14	139.1	577.1	1.59	10.9
		1975	FTP	5.54	131.3	562.7	1.64	11.3
OTHER TESTS:		HOT	START	5.09	126.4	544.1	1.63	11.7
	MODAL	HFET						
032	73 FORD TORI 351	COLD	TRANS	3.39	50.7	872.9	5.03	9.2
		COLD	STAB	2.99	50.2	857.0	2.75	9.4
IHCL	2488PPM CARBON	HOT	TRANS	2.52	28.7	740.3	4.85	11.2
IHCG	260PPM HEXANE	HOT	STAB	2.99	52.1	837.2	2.64	9.6
ICOL	3.9 % CO							
ICOG	2.6 % CO	1972	FTP	3.19	50.4	864.7	3.86	9.3
		1975	FTP	2.95	44.3	827.9	3.81	9.8
OTHER TESTS:		HOT	START	2.76	40.7	790.1	3.72	10.3
	MODAL,A/C	HFET						

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO

```
                        APPENDIX C,CONT'D

           LISTING OF FEDERAL TEST PROCEDURE RESULTS
               ON INDIVIDUAL VEHICLES IN HOUSTON

                                                                   MPG
VEH                                  -----GRAMS PER MILE-----     FUEL
NO.  YR MAKE MODL CID TEST  TYPE     HC     CO     CO2   NOXC     ECON
------------------------------------------------------------------------
033  73 FORD LTD  400 COLD TRANS   4.46   75.5   764.6 13.44      9.9
                      COLD  STAB   4.95  142.5   737.7 11.37      9.1
IHCL  3522PPM CARBON  HOT  TRANS   3.75   71.4   685.6 14.90     11.0
IHCG   380PPM HEXANE  HOT   STAB   4.41  132.2   750.0 11.31      9.1
ICOL  6.5 % CO
ICOG  5.7 % CO        1972   FTP   4.71  109.9   750.8 12.38      9.5
                      1975   FTP   4.51  108.8   728.9 12.78      9.7
OTHER TESTS:          HOT  START   4.09  102.6   718.6 13.06      9.9
   MODAL,A/C          HFET


034  73 FORD STAW 400 COLD TRANS   6.04  100.3   984.7  4.07      7.6
                      COLD  STAB   2.69   43.4  1030.9  2.26      8.0
IHCL  1710PPM CARBON  HOT  TRANS   3.78   51.1   854.3  3.54      9.4
IHCG   200PPM HEXANE  HOT   STAB   2.72   39.3  1010.0  1.86      8.2
ICOL  0.4 % CO
ICOG  0.5 % CO        1972   FTP   4.32   71.1  1008.4  3.14      7.8
                      1975   FTP   3.69   57.4   972.2  2.99      8.3
OTHER TESTS:          HOT  START   3.24   45.1   934.2  2.66      8.7
         MODAL        HFET


035  73 MAZD RX2   70 COLD TRANS   5.84   27.0   484.8  1.51     16.3
                      COLD  STAB   6.10   30.8   703.8  1.53     11.5
IHCL  2187PPM CARBON  HOT  TRANS   7.03   35.4   535.0  2.12     14.5
IHCG   350PPM HEXANE  HOT   STAB   7.23   38.6   710.0  1.42     11.2
ICOL  0.8 % CO
ICOG  0.9 % CO        1972   FTP   5.97   28.9   597.2  1.42     13.4
                      1975   FTP   6.30   31.3   611.2  1.54     13.0
OTHER TESTS:          HOT  START   7.13   37.0   624.8  1.76     12.6
         MODAL        HFET


036  73 MERC MARQ 429 COLD TRANS   5.10   45.3   727.0  4.48     10.9
                      COLD  STAB   3.63   27.0   884.0  2.91      9.5
IHCL  2016PPM CARBON  HOT  TRANS   5.17   34.1   735.5  4.78     11.0
IHCG   270PPM HEXANE  HOT   STAB   4.42   23.7   870.5  3.05      9.6
ICOL  1.0 % CO
ICOG  0.9 % CO        1972   FTP   4.35   35.9   807.6  3.67     10.1
                      1975   FTP   4.37   32.8   809.9  3.76     10.1
OTHER TESTS:          HOT  START   4.79   28.8   804.8  3.89     10.3
         MODAL        HFET

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN HOUSTON

```
                                                                   MPG
VEH                                    -----GRAMS PER MILE-----   FUEL
NO.  YR MAKE MODL CID TEST   TYPE    HC     CO     CO2    NOXC    ECON
-----------------------------------------------------------------------
037   73 OLDS CUTL 350 COLD TRANS  2.74   25.9   771.3   2.84   10.8
                       COLD  STAB  1.77    9.7   901.6   1.94    9.6
IHCL    780PPM CARBON  HOT  TRANS  2.01   12.9   712.7   2.83   12.0
IHCG    100PPM HEXANE  HOT   STAB  1.81    9.1   870.4   1.93   10.0
ICOL  0.1 % CO
ICOG  0.1 % CO         1972   FTP  2.24   17.6   838.2   2.38   10.2
                       1975   FTP  2.04   14.0   822.0   2.38   10.4
OTHER TESTS:           HOT  START  1.91   10.9   793.7   2.37   10.9
           MODAL       HFET


038   73 OLDS DELT 455 COLD TRANS  5.74   59.7   871.2   7.10    9.0
                       COLD  STAB  3.17   37.0   828.4   6.00    9.9
IHCL   8664PPM CARBON  HOT  TRANS  2.46   23.8   749.6   8.30   11.2
IHCG    200PPM HEXANE  HOT   STAB  3.27   35.5   813.1   5.77   10.1
ICOL  2.3 % CO
ICOG  2.2 % CO         1972   FTP  4.42   48.0   849.3   6.54    9.5
                       1975   FTP  3.51   38.1   815.5   6.87   10.0
OTHER TESTS:           HOT  START  2.88   29.8   782.2   7.00   10.6
           MODAL       HFET


039   73 PLYM SATE 318 COLD TRANS  6.45  110.3   726.3   5.89    9.6
                       COLD  STAB  4.93  123.9   741.5   3.75    9.3
IHCL   3511PPM CARBON  HOT  TRANS  4.41   85.8   636.8   6.09   11.3
IHCG   1290PPM HEXANE  HOT   STAB  5.17  130.3   719.6   3.39    9.4
ICOL  5.6 % CO
ICOG  4.5 % CO         1972   FTP  5.67  117.3   734.1   4.79    9.5
                       1975   FTP  5.10  110.5   709.3   4.85    9.9
OTHER TESTS:           HOT  START  4.80  108.6   679.3   4.70   10.3
           MODAL       HFET


040   73 PLYM FURY 360 COLD TRANS  8.65  144.1   791.0   3.40    8.5
                       COLD  STAB  8.47  240.9   735.8   2.25    7.8
IHCL   6037PPM CARBON  HOT  TRANS  6.70  162.6   678.9   3.28    9.3
IHCG    320PPM HEXANE  HOT   STAB  8.29  246.7   714.4   2.08    7.9
ICOL  6.5 % CO
ICOG  6.8 % CO         1972   FTP  8.58  193.8   762.7   2.81    8.1
                       1975   FTP  8.02  198.9   731.6   2.78    8.3
OTHER TESTS:           HOT  START  7.52  205.7   697.1   2.67    8.5
           MODAL       HFET

FUEL ECONOMY CALCULATIONS ASSUME A [illegible] CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN HOUSTON

VEH NO. YR MAKE MODL CID	TEST	TYPE	-----GRAMS PER MILE----- HC	CO	CO2	NOXC	MPG FUEL ECON
041 73 PONT VENT 350	COLD	TRANS	6.32	68.8	758.2	5.02	10.0
	COLD	STAB	6.41	83.5	673.8	2.24	10.8
IHCL 10052PPM CARBON	HOT	TRANS	4.85	46.1	569.1	5.92	13.5
IHCG 600PPM HEXANE	HOT	STAB	6.64	84.2	622.2	2.22	11.4
ICOL 6.5 % CO							
ICOG 4.8 % CO	1972	FTP	6.36	76.4	714.9	3.60	10.4
	1975	FTP	5.96	70.1	662.4	3.85	11.2
OTHER TESTS:	HOT	START	5.77	65.7	596.3	4.02	12.4
MODAL	HFET						
042 73 PONT BONN 400	COLD	TRANS	6.95	81.4	983.1	4.58	7.8
	COLD	STAB	5.96	154.4	722.7	2.26	9.0
IHCL 5232PPM CARBON	HOT	TRANS	4.56	75.2	694.4	4.50	10.7
IHCG 380PPM HEXANE	HOT	STAB	5.80	152.6	710.1	2.34	9.2
ICOL 6.5 % CO							
ICOG 6.4 % CO	1972	FTP	6.44	118.8	849.4	3.39	8.4
	1975	FTP	5.78	117.1	769.3	3.37	9.1
OTHER TESTS:	HOT	START	5.20	115.0	702.5	3.39	9.9
MODAL,A/C	HFET						
043 73 TOYO CORO 120	COLD	TRANS	4.96	81.2	414.2	4.10	15.9
	COLD	STAB	2.37	36.7	482.3	4.28	16.2
IHCL 9610PPM CARBON	HOT	TRANS	2.53	27.2	400.8	5.06	19.7
IHCG 630PPM HEXANE	HOT	STAB	1.98	21.9	486.0	4.15	16.8
ICOL 3.5 % CO							
ICOG 2.8 % CO	1972	FTP	3.63	58.4	449.1	4.19	16.1
	1975	FTP	2.95	43.4	445.4	4.46	17.0
OTHER TESTS:	HOT	START	2.25	24.5	444.5	4.60	18.1
MODAL	HFET						
044 73 VOLK SEDA 97	COLD	TRANS	5.95	94.4	413.7	5.49	15.3
	COLD	STAB	4.76	70.9	449.1	4.02	15.4
IHCL 3723PPM CARBON	HOT	TRANS	5.32	59.7	386.1	4.96	17.9
IHCG 385PPM HEXANE	HOT	STAB	5.94	70.1	472.4	4.80	14.8
ICOL 4.3 % CO							
ICOG 3.3 % CO	1972	FTP	5.34	82.4	431.9	4.74	15.3
	1975	FTP	5.17	72.7	424.2	4.59	16.0
OTHER TESTS:	HOT	START	5.64	65.0	430.4	4.88	16.1
MODAL	HFET						

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO

```
                               APPENDIX C,CONT'D

                  LISTING OF FEDERAL TEST PROCEDURE RESULTS
                      ON INDIVIDUAL VEHICLES IN HOUSTON

                                                                           MPG
VEH                                    -----GRAMS PER MILE-----           FUEL
NO.  YR MAKE MODL CID TEST  TYPE    HC     CO     CO2    NOXC      ECON
------------------------------------------------------------------------------
045  73 VOLK STAN 103 COLD TRANS 24.51   49.0   498.4   3.66      13.6
                      COLD  STAB  2.34   43.9   677.6   2.23      11.8
IHCL  1537PPM CARBON  HOT  TRANS  2.83   43.8   501.5   3.24      15.3
IHCG   170PPM HEXANE  HOT   STAB  8.51   59.0   630.4   2.16      11.8
ICOL  3.5 % CO
ICOG  3.0 % CO        1972   FTP 13.13   46.4   590.4   2.93      12.6
                      1975   FTP  7.12   44.9   591.2   2.81      13.0
OTHER TESTS:          HOT  START  5.75   51.6   567.7   2.69      13.3
         MODAL        HFET


046  72 BUIC LESA 350 COLD TRANS  3.80   54.9   773.3   6.25      10.2
                      COLD  STAB  3.44   52.2   823.5   4.78       9.7
IHCL  1880PPM CARBON  HOT  TRANS  3.44   78.3   612.6   4.31      11.9
IHCG   150PPM HEXANE  HOT   STAB  4.41  128.1   725.4   2.48       9.4
ICOL  2.2 % CO
ICOG  1.5 % CO        1972   FTP  3.61   53.5   799.1   5.50       9.9
                      1975   FTP  3.51   60.0   754.5   4.96      10.3
OTHER TESTS:          HOT  START  3.94  103.9   670.5   3.37      10.5
         MODAL        HFET


047  72 BUIC ELEC 455 COLD TRANS  3.01   34.2   998.5  11.79       8.4
                      COLD  STAB  2.29   19.5   966.7   8.54       8.8
IHCL  1489PPM CARBON  HOT  TRANS  2.05   13.9   805.5  11.46      10.6
IHCG   165PPM HEXANE  HOT   STAB  2.27   16.5   944.2   8.79       9.1
ICOL  1.7 % CO
ICOG  1.5 % CO        1972   FTP  2.64   26.6   982.2  10.12       8.6
                      1975   FTP  2.37   21.0   928.6  10.03       9.2
OTHER TESTS:          HOT  START  2.16   15.2   876.7  10.09       9.8
         MODAL        HFET


048  72 CHEV VEGA 140 COLD TRANS  3.64   48.9   514.8   4.63      14.7
                      COLD  STAB  1.79   31.5   606.8   3.09      13.4
IHCL   220PPM CARBON  HOT  TRANS  2.70   36.7   457.2   4.19      17.0
IHCG    50PPM HEXANE  HOT   STAB  1.29   28.9   604.7   2.56      13.6
ICOL  0.2 % CO
ICOG  0.2 % CO        1972   FTP  2.69   40.0   562.0   3.84      14.0
                      1975   FTP  2.43   36.6   546.0   3.72      14.5
OTHER TESTS:          HOT  START  1.98   32.7   532.9   3.36      15.0
         MODAL        HFET

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C, CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS ON INDIVIDUAL VEHICLES IN HOUSTON

VEH NO.	YR MAKE MODL CID	TEST	TYPE	-----GRAMS PER MILE----- HC	CO	CO2	NOXC	MPG FUEL ECON
049	72 CHEV VEGA 140	COLD	TRANS	8.55	69.2	409.0	3.80	16.3
		COLD	STAB	4.10	57.0	464.0	2.35	15.7
IHCL	2016PPM CARBON	HOT	TRANS	4.99	49.1	343.5	3.82	20.3
IHCG	165PPM HEXANE	HOT	STAB	3.47	57.8	416.0	2.08	17.1
ICOL	4.1 % CO							
ICOG	3.2 % CO	1972	FTP	6.26	63.0	437.3	3.06	16.0
		1975	FTP	5.28	57.4	419.1	3.06	16.9
OTHER TESTS:		HOT	START	4.21	53.6	380.7	2.93	18.6
	MODAL	HFET						
050	72 CHEV NOVA 307	COLD	TRANS	5.51	55.7	690.3	4.06	11.2
		COLD	STAB	2.17	29.4	735.8	2.78	11.3
IHCL	2810PPM CARBON	HOT	TRANS	2.23	25.6	645.2	3.81	12.8
IHCG	440PPM HEXANE	HOT	STAB	2.18	27.9	703.9	2.72	11.8
ICOL	2.5 % CO							
ICOG	2.6 % CO	1972	FTP	3.79	42.2	713.6	3.41	11.2
		1975	FTP	2.88	33.8	701.1	3.34	11.6
OTHER TESTS:		HOT	START	2.20	26.8	675.3	3.25	12.3
	MODAL	HFET						
051	72 CHEV MONT 350	COLD	TRANS	4.15	59.0	662.0	5.90	11.6
		COLD	STAB	2.81	44.3	678.1	3.64	11.7
IHCL	1898PPM CARBON	HOT	TRANS	2.25	24.9	588.8	6.33	14.0
IHCG	280PPM HEXANE	HOT	STAB	2.43	36.3	668.1	3.87	12.1
ICOL	2.5 % CO							
ICOG	3.1 % CO	1972	FTP	3.46	51.5	670.3	4.74	11.6
		1975	FTP	2.93	42.0	650.0	4.86	12.2
OTHER TESTS:		HOT	START	2.34	30.7	629.5	5.07	13.0
	MODAL	HFET						
052	72 CHEV NOVA 350	COLD	TRANS	4.26	69.7	740.9	6.01	10.3
		COLD	STAB	3.63	117.8	737.1	2.90	9.5
IHCL	9056PPM CARBON	HOT	TRANS	3.39	75.2	649.8	5.53	11.4
IHCG	820PPM HEXANE	HOT	STAB	4.80	165.9	688.3	2.16	9.2
ICOL	6.5 % CO							
ICOG	9.5 % CO	1972	FTP	3.94	94.4	738.9	4.42	9.9
		1975	FTP	3.70	95.9	713.7	4.28	10.1
OTHER TESTS:		HOT	START	4.11	121.8	669.5	3.80	10.2
	MODAL	HFET						

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN HOUSTON

```
VEH                                                                         MPG
NO.  YR MAKE MODL CID TEST   TYPE     -----GRAMS PER MILE-----              FUEL
                                      HC       CO       CO2      NOXC       ECON
-------------------------------------------------------------------------------------
053   72 CHEV STAW 350 COLD  TRANS   3.66    61.8    1030.3    6.22        7.8
                       COLD   STAB   2.67    61.4     919.9    4.24        8.7
IHCL   2918PPM CARBON  HOT   TRANS   2.26    36.7     901.9    6.03        9.2
IHCG    285PPM HEXANE  HOT    STAB   2.77    61.6     904.6    4.21        8.8
ICOL   5.9 % CO
ICOG   4.4 % CO        1972    FTP   3.15    61.6     973.6    5.20        8.2
                       1975    FTP   2.76    54.6     938.0    5.15        8.6
OTHER TESTS:           HOT   START   2.52    49.5     903.3    5.09        9.0
          MODAL        HFET


054   72 CHEV IMPA 400 COLD  TRANS   5.17    90.6     736.5    4.41        9.9
                       COLD   STAB   3.83    86.3     789.3    3.09        9.5
IHCL   6088PPM CARBON  HOT   TRANS   3.14    60.6     688.2    4.47       11.2
IHCG    620PPM HEXANE  HOT    STAB   4.49    99.5     742.6    2.98        9.7
ICOL   6.5 % CO
ICOG   6.5 % CO        1972    FTP   4.48    88.4     763.6    3.73        9.7
                       1975    FTP   3.92    80.1     750.2    3.75       10.0
OTHER TESTS:           HOT   START   3.83    80.6     716.1    3.71       10.4
          MODAL        HFET


055   72 DATS STAW  97 COLD  TRANS   3.71    22.6     425.9    6.61       18.8
                       COLD   STAB   3.67    16.9     466.9    6.04       17.6
IHCL   3622PPM CARBON  HOT   TRANS   3.03    16.9     381.3    6.76       21.3
IHCG    335PPM HEXANE  HOT    STAB   3.85    18.1     442.2    5.97       18.4
ICOL   2.4 % CO
ICOG   2.9 % CO        1972    FTP   3.69    19.7     447.0    6.32       18.1
                       1975    FTP   3.50    18.1     434.6    6.36       18.7
OTHER TESTS:           HOT   START   3.45    17.5     412.6    6.36       19.7
          MODAL        HFET


056   72 DODG DART 318 COLD  TRANS   5.77    83.7     593.6    5.29       11.9
                       COLD   STAB   3.31    67.8     563.4    4.33       13.0
IHCL   2314PPM CARBON  HOT   TRANS   3.31    53.9     514.4    5.35       14.6
IHCG    260PPM HEXANE  HOT    STAB   3.88    83.1     562.9    4.05       12.6
ICOL   4.3 % CO
ICOG   4.0 % CO        1972    FTP   4.51    75.6     578.1    4.80       12.5
                       1975    FTP   3.82    67.3     556.1    4.81       13.2
OTHER TESTS:           HOT   START   3.60    68.8     539.3    4.68       13.5
          MODAL        HFET

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN HOUSTON

```
VEH                                                                   MPG
                                      -----GRAMS PER MILE-----        FUEL
NO.  YR MAKE MODL CID TEST  TYPE    HC     CO     CO2    NOXC      ECON
-----------------------------------------------------------------------------
057  72 DODG POLA 360 COLD TRANS 20.49 152.8  684.4   7.78       9.0
                      COLD  STAB 27.21 190.8  707.4   6.83       8.1
IHCL 10052PPM CARBON  HOT  TRANS 15.20 119.7  621.9   7.57      10.3
IHCG  1400PPM HEXANE  HOT   STAB 23.54 178.0  690.3   6.25       8.5
ICOL  5.9 % CO
ICOG  4.9 % CO        1972   FTP 23.94 172.3  696.2   7.29       8.5
                      1975   FTP 22.47 163.1  678.9   7.24       8.8
OTHER TESTS:          HOT  START 19.48 149.6  657.0   6.89       9.3
         MODAL        HFET


058  72 FORD PINT 122 COLD TRANS  5.90  58.8  474.7   2.94      15.2
                      COLD  STAB  1.68  26.6  526.0   2.85      15.5
IHCL  1173PPM CARBON  HOT  TRANS  2.02  24.9  434.5   3.60      18.5
IHCG   150PPM HEXANE  HOT   STAB  1.15  17.8  516.6   2.83      16.2
ICOL  0.1 % CO
ICOG  0.1 % CO        1972   FTP  3.73  42.2  501.0   2.90      15.3
                      1975   FTP  2.66  32.9  489.9   3.08      16.1
OTHER TESTS:          HOT  START  1.58  21.3  476.6   3.21      17.2
         MODAL        HFET


059  72 FORD TORI 302 COLD TRANS  4.79  55.3  690.5   5.10      11.2
                      COLD  STAB  3.42  31.4  746.9   3.12      11.0
IHCL  8050PPM CARBON  HOT  TRANS  3.84  22.0  628.0   5.41      13.2
IHCG  1300PPM HEXANE  HOT   STAB  2.54  28.7  740.0   3.32      11.2
ICOL  2.3 % CO
ICOG  1.4 % CO        1972   FTP  4.09  43.0  719.5   4.08      11.1
                      1975   FTP  3.83  33.8  702.1   4.17      11.6
OTHER TESTS:          HOT  START  3.18  25.5  685.5   4.34      12.1
         MODAL        HFET


060  72 FORD GALA 351 COLD TRANS  7.06 191.8  567.2   1.68      10.0
                      COLD  STAB  5.34 207.0  615.5   0.85       9.3
IHCL  1862PPM CARBON  HOT  TRANS  5.50 164.7  508.8   1.49      11.3
IHCG   235PPM HEXANE  HOT   STAB  4.59 182.0  612.2   0.92       9.7
ICOL  2.4 % CO
ICOG  2.0 % CO        1972   FTP  6.18 199.6  592.0   1.25       9.6
                      1975   FTP  5.75 192.1  575.8   1.20       9.9
OTHER TESTS:          HOT  START  5.03 173.6  561.9   1.20      10.4
         MODAL        HFET

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS ON INDIVIDUAL VEHICLES IN HOUSTON

```
                                                                    MPG
                                         -----GRAMS PER MILE-----   FUEL
VEH                                                                 ECON
NO.  YR MAKE MODL CID TEST   TYPE    HC      CO     CO2    NOXC
---------------------------------------------------------------------------
061   72 FORD GRAN 351 COLD TRANS   6.02   75.0   768.9   9.88     9.8
                       COLD  STAB   3.58   85.8   788.1   7.25     9.5
IHCL   3622PPM CARBON  HOT  TRANS   6.89   67.9   668.1   8.54    11.1
IHCG    170PPM HEXANE  HOT   STAB   3.79  101.8   743.0   6.37     9.7
ICOL  6.2 % CO
ICOG  3.7 % CO          1972  FTP   4.77   80.6   778.8   8.53     9.6
                        1975  FTP   5.01   78.6   750.8   8.16    10.0
OTHER TESTS:           HOT  START   5.30   85.3   706.5   7.43    10.4
        MODAL          HFET


062   72 FORD STAW 400 COLD TRANS   5.58   74.0   793.7  12.67     9.6
                       COLD  STAB   3.01   32.8   887.6  11.78     9.4
IHCL   1233PPM CARBON  HOT  TRANS   3.52   25.0   730.0  14.89    11.4
IHCG    195PPM HEXANE  HOT   STAB   3.24   30.5   876.1  11.84     9.5
ICOL  1.0 % CO
ICOG  1.3 % CO          1972  FTP   4.26   52.8   841.9  12.21     9.5
                        1975  FTP   3.69   39.3   824.2  12.83     9.9
OTHER TESTS:           HOT  START   3.37   27.8   805.0  13.33    10.3
        MODAL          HFET


063   72 FORD LTDB 429 COLD TRANS   5.38  151.8   783.5   4.97     8.5
                       COLD  STAB   3.55  120.4   833.1   5.46     8.6
IHCL   2666PPM CARBON  HOT  TRANS   4.43  105.5   684.5   5.97    10.3
IHCG    275PPM HEXANE  HOT   STAB   3.92  135.4   783.2   5.12     8.8
ICOL  4.9 % CO
ICOG  4.5 % CO          1972  FTP   4.44  135.7   809.0   5.22     8.6
                        1975  FTP   4.18  122.8   781.5   5.50     9.0
OTHER TESTS:           HOT  START   4.17  120.9   735.2   5.53     9.5
        MODAL          HFET


064   72 LINC MRK4 460 COLD TRANS   5.05   74.6   849.6   7.93     9.0
                       COLD  STAB   2.19   22.0   926.9   7.17     9.2
IHCL   2287PPM CARBON  HOT  TRANS   2.84   29.7   823.0  11.40    10.1
IHCG    196PPM HEXANE  HOT   STAB   3.32   45.4   990.7   8.92     8.3
ICOL  4.0 % CO
ICOG  3.6 % CO          1972  FTP   3.58   47.6   889.3   7.54     9.1
                        1975  FTP   2.97   35.1   881.9   8.51     9.4
OTHER TESTS:           HOT  START   3.09   37.8   909.0  10.13     9.1
        MODAL          HFET

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN HOUSTON

```
                                                                     MPG
VEH                                    -----GRAMS PER MILE-----     FUEL
NO.  YR MAKE MODL CID TEST  TYPE     HC     CO      CO2    NOXC    ECON
-------------------------------------------------------------------------
065  72 MERC STAW 400 COLD TRANS   7.83 109.0   764.4   9.51     9.2
                      COLD  STAB   3.41 101.8   780.0   9.55     9.3
IHCL  3270PPM CARBON  HOT  TRANS   3.73  63.9   676.7  11.71    11.2
IHCG   350PPM HEXANE  HOT   STAB   3.38 110.4   757.5   9.27     9.4
ICOL  6.5 % CO
ICOG  5.8 % CO        1972   FTP   5.56 105.3   772.4   9.53     9.3
                      1975   FTP   4.43  92.8   748.1  10.14     9.8
OTHER TESTS:          HOT  START   3.55  87.8   718.2  10.46    10.2
        MODAL         HFET


066  72 OLDS DELT 350 COLD TRANS   5.63  74.2   729.2   7.50    10.3
                      COLD  STAB   4.49  79.2   773.7   6.67     9.7
IHCL  3079PPM CARBON  HOT  TRANS   4.52  54.6   689.1   9.00    11.2
IHCG   365PPM HEXANE  HOT   STAB   4.76 104.6   738.9   5.84     9.7
ICOL  4.0 % CO
ICOG  3.8 % CO        1972   FTP   5.05  76.8   752.1   7.08    10.0
                      1975   FTP   4.74  71.3   740.9   7.49    10.2
OTHER TESTS:          HOT  START   4.64  80.3   714.6   7.38    10.4
        MODAL         HFET


067  72 OLDS STAW 455 COLD TRANS   5.70  78.5  1021.4   7.23     7.6
                      COLD  STAB   2.19  26.2  1051.9   5.52     8.1
IHCL  1685PPM CARBON  HOT  TRANS   1.82  21.7   898.3   7.42     9.5
IHCG   165PPM HEXANE  HOT   STAB   2.01  22.3  1016.9   5.37     8.4
ICOL  0.8 % CO
ICOG  0.8 % CO        1972   FTP   3.90  51.7  1037.0   6.35     7.8
                      1975   FTP   2.82  35.9  1002.9   6.40     8.3
OTHER TESTS:          HOT  START   1.92  22.0   959.2   6.36     8.9
        MODAL         HFET


068  72 OPEL STAW 116 COLD TRANS   5.16 109.0   520.3   3.56    12.5
                      COLD  STAB   1.75  53.7   526.0   3.11    14.4
IHCL  1354PPM CARBON  HOT  TRANS   1.98  45.2   462.7   3.80    16.4
IHCG   210PPM HEXANE  HOT   STAB   1.74  53.6   514.9   2.94    14.7
ICOL  6.5 % CO
ICOG  6.8 % CO        1972   FTP   3.41  80.6   523.2   3.33    13.4
                      1975   FTP   2.53  62.9   507.3   3.40    14.5
OTHER TESTS:          HOT  START   1.85  49.5   489.5   3.36    15.5
        MODAL         HFET

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS ON INDIVIDUAL VEHICLES IN HOUSTON

```
                                                                    MPG
VEH                                     -----GRAMS PER MILE-----   FUEL
NO.  YR MAKE MODL CID TEST   TYPE     HC     CO     CO2   NOXC   ECON
------------------------------------------------------------------------
069  72 PLYM VALI 225 COLD  TRANS   5.34  105.4   531.9   6.28   12.4
                      COLD   STAB   2.64   54.3   464.2   4.67   15.9
IHCL  3018PPM CARBON  HOT   TRANS   3.49   90.8   453.3   4.45   14.6
IHCG   250PPM HEXANE  HOT    STAB   3.24   73.0   498.4   4.20   14.2
ICOL  3.4 % CO
ICOG  2.5 % CO        1972    FTP   3.96   79.2   497.1   5.45   14.0
                      1975    FTP   3.44   75.1   475.3   4.95   14.7
OTHER TESTS:          HOT   START   3.36   81.6   476.5   4.32   14.4
        MODAL         HFET


070  72 PLYM SATE 318 COLD  TRANS   6.97  114.2   681.4   4.86   10.1
                      COLD   STAB   4.56   96.2   681.3   5.10   10.5
IHCL  2767PPM CARBON  HOT   TRANS   3.64   55.5   610.0   6.13   12.5
IHCG   180PPM HEXANE  HOT    STAB   4.80  103.2   641.2   5.31   10.8
ICOL  4.8 % CO
ICOG  3.5 % CO        1972    FTP   5.73  105.0   681.3   4.99   10.3
                      1975    FTP   4.81   88.7   661.5   5.34   10.9
OTHER TESTS:          HOT   START   4.23   80.0   626.0   5.71   11.6
        MODAL         HFET


071  72 PONT VENT 350 COLD  TRANS   9.26  106.4   841.1   7.78    8.6
                      COLD   STAB   6.25  114.8   821.8   4.58    8.7
IHCL  8956PPM CARBON  HOT   TRANS   5.00   56.0   720.9   8.59   10.8
IHCG   465PPM HEXANE  HOT    STAB   5.71  105.1   779.2   4.47    9.2
ICOL  6.5 % CO
ICOG  6.0 % CO        1972    FTP   7.72  110.7   831.2   6.14    8.6
                      1975    FTP   6.54   96.8   797.9   6.36    9.1
OTHER TESTS:          HOT   START   5.36   81.2   750.8   6.48    9.9
        MODAL         HFET


072  72 PONT BONN 455 COLD  TRANS   5.18   57.7   969.1   8.77    8.2
                      COLD   STAB   4.98   51.4   853.7   8.05    9.3
IHCL 10052PPM CARBON  HOT   TRANS   3.79   28.2   797.4  10.71   10.4
IHCG   690PPM HEXANE  HOT    STAB   5.06   51.9   843.4   7.95    9.4
ICOL  6.5 % CO
ICOG  5.8 % CO        1972    FTP   5.08   54.5   909.8   8.40    8.8
                      1975    FTP   4.70   46.3   862.2   8.94    9.3
OTHER TESTS:          HOT   START   4.44   40.4   821.0   9.29    9.9
        MODAL         HFET

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS ON INDIVIDUAL VEHICLES IN HOUSTON

```
                                                                     MPG
VEH                                      -----GRAMS PER MILE-----   FUEL
NO.  YR MAKE MODL CIL TEST   TYPE    HC     CO     CO2    NOXC    ECON
--------------------------------------------------------------------------
073  72 TOYO CARI  97 COLD TRANS   4.36   55.4   414.2   6.92    17.2
                      COLD  STAB   3.59   34.8   379.6   4.41    19.9
IHCL  7929PPM CARBON  HOT  TRANS   3.40   35.6   355.9   6.09    21.0
IHCG   790PPM HEXANE  HOT   STAB   3.90   34.7   403.5   5.27    18.9
ICOL  1.7 % CO
ICOG  0.9 % CO        1972   FTP   3.96   44.8   396.4   5.63    18.5
                      1975   FTP   3.70   39.3   380.3   5.40    19.6
OTHER TESTS:          HOT  START   3.66   35.1   380.3   5.67    19.8
        MODAL         HFET


074  72 VOLK SEDA  97 COLD TRANS   4.59   69.2   399.2   5.22    17.0
                      COLD  STAB   3.46   50.5   461.1   4.44    16.1
IHCL  1128PPM CARBON  HOT  TRANS   3.31   45.2   375.1   4.72    19.4
IHCG    85PPM HEXANE  HOT   STAB   3.19   49.1   443.3   4.40    16.7
ICOL  1.9 % CO
ICOG  0.9 % CO        1972   FTP   4.01   59.6   431.0   4.82    16.5
                      1975   FTP   3.66   53.0   424.3   4.68    17.1
OTHER TESTS:          HOT  START   3.25   47.2   410.1   4.55    17.9
        MODAL         HFET


075  72 VOLK SEDA  97 COLD TRANS   9.15 135.3   336.4   2.51    15.4
                      COLD  STAB   7.83 120.3   393.0   2.30    14.6
IHCL  3220PPM CARBON  HOT  TRANS   4.99   63.9   363.5   4.83    18.5
IHCG   240PPM HEXANE  HOT   STAB   7.22 100.4   394.0   2.59    15.4
ICOL  4.8 % CO
ICOG  4.2 % CO        1972   FTP   8.48 127.6   365.4   2.41    15.0
                      1975   FTP   7.32 107.8   372.9   3.05    15.7
OTHER TESTS:          HOT  START   6.13   82.6   379.1   3.68    16.8
        MODAL         HFET


076  71 AMMO JAVE 304 COLD TRANS   6.28   77.3   639.0   6.61    11.4
                      COLD  STAB   3.05   43.5   711.2   3.46    11.2
IHCL  2113PPM CARBON  HOT  TRANS   4.37   37.1   577.0   6.79    13.7
IHCG   250PPM HEXANE  HOT   STAB   3.13   65.0   675.8   3.15    11.3
ICOL  2.2 % CO
ICOG  2.0 % CO        1972   FTP   4.62   59.9   676.1   4.99    11.3
                      1975   FTP   4.09   48.8   658.9   5.05    11.9
OTHER TESTS:          HOT  START   3.73   51.4   627.7   4.92    12.3
        NONE          HFET

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C, CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS ON INDIVIDUAL VEHICLES IN HOUSTON

```
                                                                       MPG
VEH                                      -----GRAMS PER MILE-----     FUEL
NO.   YR MAKE MODL CID TEST  TYPE    HC     CO     CO2    NOXC       ECON
---------------------------------------------------------------------------
077   71 BUIC SKYL 350 COLD TRANS   5.25   70.1   657.4   4.67      11.3
                       COLD  STAB   4.90   77.2   761.3   3.29       9.9
IHCL  6842PPM CARBON   HOT  TRANS   3.38   38.6   569.2   4.72      13.9
IHCG   580PPM HEXANE   HOT   STAB   4.58   75.1   633.2   3.11      11.6
ICOL  6.5 % CO
ICOG  6.0 % CO         1972   FTP   5.07   73.7   710.7   3.96      10.5
                       1975   FTP   4.55   65.0   686.3   3.98      11.1
OTHER TESTS:           HOT  START   3.99   57.3   602.1   3.90      12.6
        NONE           HFET


078   71 BUIC ELEC 455 COLD TRANS   7.26  181.6   721.8   3.23       6.6
                       COLD  STAB   4.84  149.5   775.9   1.22       8.6
IHCL  3270PPM CARBON   HOT  TRANS   4.47  133.0   554.0   2.68      11.4
IHCG   280PPM HEXANE   HOT   STAB   4.86  164.5   732.3   1.08       8.8
ICOL  4.6 % CO
ICOG  4.0 % CO         1972   FTP   6.02  165.1   749.6   2.20       8.6
                       1975   FTP   5.24  151.7   703.0   2.04       9.3
OTHER TESTS:           HOT  START   4.67  149.2   645.5   1.86       9.9
        NONE           HFET


079   71 CADI SEDA 472 COLD TRANS   7.70  273.5   856.3   2.52       6.8
                       COLD  STAB   2.20  164.2  1016.6   1.48       6.9
IHCL   767PPM CARBON   HOT  TRANS   2.80  140.4   814.9   2.31       8.5
IHCG    92PPM HEXANE   HOT   STAB   2.51  145.1  1009.3   1.53       7.1
ICOL  2.6 % CO
ICOG  2.3 % CO         1972   FTP   4.88  217.4   938.6   1.99       6.8
                       1975   FTP   3.52  180.5   927.1   1.93       7.3
OTHER TESTS:           HOT  START   2.65  142.8   914.7   1.91       7.7
        NONE           HFET


080   71 CHEV VEGA 140 COLD TRANS   5.25   66.5   391.8   2.87      17.3
                       COLD  STAB   3.51   56.4   490.8   2.18      15.0
IHCL  2817PPM CARBON   HOT  TRANS   2.65   40.9   373.4   3.02      19.9
IHCG   215PPM HEXANE   HOT   STAB   3.41   67.9   463.4   1.76      15.3
ICOL  3.4 % CO
ICOG  3.2 % CO         1972   FTP   4.35   61.3   442.7   2.52      16.1
                       1975   FTP   3.63   54.2   437.5   2.56      16.6
OTHER TESTS:           HOT  START   3.04   54.7   419.6   2.37      17.2
        NONE           HFET

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN HOUSTON

```
                                                                  MPG
VEH                                     -----GRAMS PER MILE-----  FUEL
NO.  YR MAKE MODL CID TEST  TYPE    HC     CO     CO2    NOXC    ECON
-----------------------------------------------------------------------
081  71 CHEV MALI 307 COLD TRANS  4.75   49.7   687.0   6.65    11.4
                      COLD  STAB  3.21   28.0   695.5   5.31    11.8
IHCL  2817PPM CARBON  HOT  TRANS  2.91   20.7   618.8   7.59    13.4
IHCG   330PPM HEXANE  HOT   STAB  3.29   26.7   687.7   5.61    12.0
ICOL  2.6 % CO
ICOG  2.2 % CO        1972   FTP  3.96   38.6   691.3   5.96    11.6
                      1975   FTP  3.45   30.5   672.4   6.22    12.1
OTHER TESTS:          HOT  START  3.11   23.8   654.2   6.57    12.7
        NONE          HFET


082  71 CHEV IMPA 350 COLD TRANS  6.59   69.6   718.9   4.71    10.5
                      COLD  STAB  6.49   72.7   738.7   3.22    10.2
IHCL  7144PPM CARBON  HOT  TRANS  5.02   56.4   631.6   4.60    12.1
IHCG   950PPM HEXANE  HOT   STAB  7.87  116.7   679.0   2.68    10.0
ICOL  5.7 % CO
ICOG  4.7 % CO        1972   FTP  6.54   71.2   729.0   3.94    10.3
                      1975   FTP  6.11   67.5   704.8   3.91    10.7
OTHER TESTS:          HOT  START  6.48   87.4   655.9   3.61    10.9
        NONE          HFET


083  71 CHEV IMPA 350 COLD TRANS  5.02  105.1   610.1   4.91    11.2
                      COLD  STAB  5.71  158.3   612.4   2.43    10.1
IHCL  4427PPM CARBON  HOT  TRANS  4.59  101.1   543.0   5.11    12.4
IHCG   540PPM HEXANE  HOT   STAB  6.11  170.9   598.5   2.31    10.0
ICOL  4.1 % CO
ICOG  6.2 % CO        1972   FTP  5.38  132.4   611.3   3.64    10.6
                      1975   FTP  5.26  131.3   592.7   3.69    10.9
OTHER TESTS:          HOT  START  5.37  137.0   571.5   3.67    11.0
        A/C           HFET


084  71 CHEV MALI 350 COLD TRANS  4.86   52.7   714.8   6.01    10.9
                      COLD  STAB  4.13   42.0   747.1   4.71    10.7
IHCL  3421PPM CARBON  HOT  TRANS  3.26   30.0   622.6   6.91    13.0
IHCG   350PPM HEXANE  HOT   STAB  4.18   47.8   718.8   4.55    11.0
ICOL  3.9 % CO
ICOG  3.2 % CO        1972   FTP  4.49   47.2   731.4   5.34    10.8
                      1975   FTP  4.04   40.9   705.8   5.59    11.3
OTHER TESTS:          HOT  START  3.73   39.1   672.0   5.70    11.9
        NONE          HFET

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

LISTING OF FEDERAL TEST PROCEDURE RESULTS ON INDIVIDUAL VEHICLES IN HOUSTON

```
                                                                         MPG
VEH                                      -----GRAMS PER MILE-----       FUEL
NO.  YR MAKE MODL CID TEST  TYPE    HC     CO     CO2    NOXC   ECON
------------------------------------------------------------------------
085  71 CHEV IMPA 400 COLD TRANS   6.70   68.7   912.6   9.10    8.5
                      COLD  STAB   4.04   32.1   934.3   5.91    8.9
IHCL  2264PPM CARBON  HOT  TRANS   3.97   25.3   780.8   9.63   10.7
IHCG   200PPM HEXANE  HOT   STAB   3.97   30.2   954.2   6.67    8.8
ICOL  0.7 % CO
ICOG  0.6 % CO        1972   FTP   5.34   49.9   923.8   7.46    8.7
                      1975   FTP   4.58   37.9   887.2   7.61    9.2
OTHER TESTS:          HOT  START   3.97   27.8   869.8   8.11    9.6
        NONE          HFET


086  71 CHRY 300  440 COLD TRANS   7.52  126.2   762.4   6.95    9.0
                      COLD  STAB   4.79   94.6   746.8   6.55    9.7
IHCL  5333PPM CARBON  HOT  TRANS   4.47   74.6   674.2   8.04   11.0
IHCG   370PPM HEXANE  HOT   STAB   4.69   91.1   730.2   6.44   10.0
ICOL  3.4 % CO
ICOG  4.5 % CO        1972   FTP   6.12  110.0   754.4   6.74    9.4
                      1975   FTP   5.27   95.7   729.9   7.05    9.9
OTHER TESTS:          HOT  START   4.58   83.1   703.0   7.22   10.5
        NONE          HFET


087  71 DATS  110  71 COLD TRANS  12.88   68.9   429.4   2.14   15.3
                      COLD  STAB   2.92   29.3   416.4   2.79   18.8
IHCL  1805PPM CARBON  HOT  TRANS   3.05   24.2   375.7   2.52   21.0
IHCG   225PPM HEXANE  HOT   STAB   2.25   24.4   394.8   2.69   20.2
ICOL  0.1 % CO
ICOG  0.2 % CO        1972   FTP   7.77   48.6   422.7   2.47   16.9
                      1975   FTP   5.04   36.2   407.8   2.58   18.5
OTHER TESTS:          HOT  START   2.64   24.3   385.5   2.61   20.5
        NONE          HFET


088  71 DODG CHAR 318 COLD TRANS  11.23  129.9   537.2   4.02   11.4
                      COLD  STAB  17.39  208.2   492.3   3.12   10.1
IHCL 10052PPM CARBON  HOT  TRANS  10.08  116.6   475.7   4.34   12.8
IHCG   230PPM HEXANE  HOT   STAB  16.83  252.0   478.1   2.75    9.6
ICOL  6.5 % CO
ICOG  8.0 % CO        1972   FTP  14.39  170.1   514.2   3.56   10.7
                      1975   FTP  14.07  166.4   497.1   3.65   11.0
OTHER TESTS:          HOT  START  13.54  186.1   476.9   3.52   10.9
        NONE          HFET

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN HOUSTON

```
                                                                   MPG
VEH                                     -----GRAMS PER MILE-----   FUEL
NO.   YR MAKE MODL CID TEST   TYPE    HC     CO     CO2    NOXC    ECON
---------------------------------------------------------------------------
089   71 FORD PINT 122 COLD TRANS   3.38   34.3   383.2   6.25   19.8
                       COLD  STAB   2.72   16.0   423.6   6.33   19.4
IHCL    963PPM CARBON  HOT  TRANS   2.31   14.5   365.6   6.84   22.4
IHCG    120PPM HEXANE  HOT   STAB   2.94   15.0   427.7   6.27   19.3
ICOL  0.2 % CO
ICOG  0.3 % CO         1972   FTP   3.04   24.9   403.9   6.29   19.6
                       1975   FTP   2.74   19.4   399.0   6.45   20.3
OTHER TESTS:           HOT  START   2.63   14.8   397.5   6.55   20.7
         NONE          HFET


090   71 FORD MAVE 200 COLD TRANS   3.49   45.6   481.7   9.44   15.7
                       COLD  STAB   3.43   55.0   470.1   7.56   15.6
IHCL  3723PPM CARBON   HOT  TRANS   3.30   27.8   443.1   9.96   17.9
IHCG   310PPM HEXANE   HOT   STAB   3.68   48.9   469.1   7.54   15.9
ICOL  5.3 % CO
ICOG  4.0 % CO         1972   FTP   3.46   50.4   475.7   8.47   15.7
                       1975   FTP   3.41   45.5   465.0   8.62   16.2
OTHER TESTS:           HOT  START   3.49   38.6   456.4   8.71   16.8
         NONE          HFET


091   71 FORD TORI 302 COLD TRANS   5.31   47.1   666.7   8.24   11.7
                       COLD  STAB   4.50   60.6   659.2   5.21   11.5
IHCL  2738PPM CARBON   HOT  TRANS   4.51   39.4   592.6   8.23   13.3
IHCG   362PPM HEXANE   HOT   STAB   4.49   50.5   671.6   5.57   11.6
ICOL  3.2 % CO
ICOG  3.5 % CO         1972   FTP   4.89   54.0   662.9   6.69   11.6
                       1975   FTP   4.67   51.9   642.3   6.68   12.0
OTHER TESTS:           HOT  START   4.50   45.1   633.1   6.86   12.4
         NONE          HFET


092   71 FORD GALA 351 COLD TRANS   6.83   98.4   644.1   7.05   10.8
                       COLD  STAB   4.84   75.8   730.8   6.21   10.3
IHCL  2918PPM CARBON   HOT  TRANS   4.93   44.3   583.7   8.64   13.3
IHCG   350PPM HEXANE   HOT   STAB   4.59   68.4   676.1   6.28   11.1
ICOL  4.1 % CO
ICOG  3.7 % CO         1972   FTP   5.61   86.8   688.6   6.62   10.5
                       1975   FTP   5.28   71.8   671.9   7.06   11.1
OTHER TESTS:           HOT  START   4.76   56.7   631.1   7.43   12.1
         A/C           HFET

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN HOUSTON

```
                                                                  MPG
VEH                                  -----GRAMS PER MILE-----    FUEL
NO.  YR MAKE MODL CID TEST  TYPE   HC     CO     CO2   NOXC    ECON
----------------------------------------------------------------------
093  71 FORD BROU 429 COLD TRANS  4.91   54.6   707.7  9.38    11.0
                      COLD  STAB  2.85   39.8   725.1  7.81    11.1
IHCL  2515PPM CARBON  HOT  TRANS  3.35   24.9   658.3 11.37    12.5
IHCG   210PPM HEXANE  HOT   STAB  2.88   41.4   774.9  8.21    10.5
ICOL  4.3 % CO
ICOG  2.6 % CO        1972   FTP  3.85   47.0   716.6  8.58    11.1
                      1975   FTP  3.42   38.8   702.9  9.13    11.5
OTHER TESTS:          HOT  START  3.11   33.4   718.1  9.75    11.4
        A/C           HFET


094  71 MERC MONT 400 COLD TRANS 11.87  128.2   771.5  9.78     8.8
                      COLD  STAB  4.08  101.0   797.2 10.95     9.2
IHCL  2558PPM CARBON  HOT  TRANS  4.00   54.0   721.0 12.73    10.8
IHCG   220PPM HEXANE  HOT   STAB  3.78   93.2   801.6 11.18     9.2
ICOL  4.4 % CO
ICOG  3.8 % CO        1972   FTP  7.87  114.2   784.7 10.38     9.0
                      1975   FTP  5.69   93.7   770.7 11.20     9.5
OTHER TESTS:          HOT  START  3.89   74.2   762.4 11.93    10.0
        NONE          HFET


095  71 OLDS STAW 350 COLD TRANS  4.62   62.8   776.4 10.29    10.0
                      COLD  STAB  2.72   20.8   786.5  7.13    10.7
IHCL  1519PPM CARBON  HOT  TRANS  2.84   16.8   689.4 10.82    12.2
IHCG   170PPM HEXANE  HOT   STAB  2.95   26.8   766.9  7.11    10.8
ICOL  1.6 % CO
ICOG  1.1 % CO        1972   FTP  3.65   41.2   781.6  8.67    10.3
                      1975   FTP  3.15   28.5   757.5  8.82    10.9
OTHER TESTS:          HOT  START  2.90   22.0   729.2  8.92    11.5
        NONE          HFET


096  71 OLDS 98   455 COLD TRANS  3.99   50.7   862.0  9.31     9.3
                      COLD  STAB  3.42   69.7   837.6  6.10     9.3
IHCL  2666PPM CARBON  HOT  TRANS  2.22   33.5   764.1  9.66    10.8
IHCG   350PPM HEXANE  HOT   STAB  3.26   66.0   809.9  5.55     9.6
ICOL  3.5 % CO
ICOG  3.2 % CO        1972   FTP  3.70   60.5   849.5  7.66     9.3
                      1975   FTP  3.21   55.7   822.3  7.76     9.6
OTHER TESTS:          HOT  START  2.75   50.2   787.6  7.55    10.1
        A/C           HFET

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN HOUSTON

```
                                                                          MPG
VEH                                       -----GRAMS PER MILE-----       FUEL
NO.   YR MAKE MODL CID TEST   TYPE      HC     CO      CO2    NOXC    ECON
--------------------------------------------------------------------------------
097   71 PLYM DUST 225 COLD TRANS     7.50  105.7   533.2    9.02    12.3
                       COLD  STAB     5.32   78.5   515.5    8.78    13.5
IHCL   4276PPM CARBON  HOT  TRANS     3.56   46.9   481.1   10.27    15.7
IHCG    280PPM HEXANE  HOT   STAB     5.27   84.4   487.7    7.53    13.9
ICOL   6.0 % CO
ICOG   5.0 % CO        1972   FTP     6.38   91.7   524.1    8.90    12.9
                       1975   FTP     5.29   75.4   509.7    9.24    13.8
OTHER TESTS:           HOT  START     4.44   66.1   484.5    8.86    14.7
          NONE         HFET


098   71 PLYM SATE 318 COLD TRANS     3.72   39.2   598.3    7.41    13.2
                       COLD  STAB     2.96   34.5   598.5    5.91    13.4
IHCL   2042PPM CARBON  HOT  TRANS     2.78   27.1   563.8    8.51    14.4
IHCG    330PPM HEXANE  HOT   STAB     3.48   50.6   623.0    6.61    12.4
ICOL   2.2 % CO
ICOG   1.9 % CO        1972   FTP     3.33   36.8   598.4    6.64    13.3
                       1975   FTP     3.07   33.4   588.8    6.94    13.6
OTHER TESTS:           HOT  START     3.14   39.2   594.2    7.53    13.3
          A/C          HFET


099   71 PONT LEMA 350 COLD TRANS     4.39   83.5   721.6    4.41    10.2
                       COLD  STAB     2.70   56.7   675.3    2.80    11.5
IHCL   4850PPM CARBON  HOT  TRANS     2.07   29.7   634.3    4.35    12.9
IHCG    560PPM HEXANE  HOT   STAB     2.60   60.0   678.4    2.72    11.4
ICOL   5.7 % CO
ICOG   5.2 % CO        1972   FTP     3.52   69.8   697.8    3.59    10.8
                       1975   FTP     2.88   54.8   673.6    3.57    11.5
OTHER TESTS:           HOT  START     2.45   45.2   657.0    3.51    12.1
          NONE         HFET


100   71 PONT GRNP 400 COLD TRANS     6.27   60.9   797.9    7.86     9.7
                       COLD  STAB     5.95   84.4   742.2    6.37     9.9
IHCL   5182PPM CARBON  HOT  TRANS     4.08   42.8   701.1    8.67    11.4
IHCG    430PPM HEXANE  HOT   STAB     5.95   83.3   733.5    6.48    10.0
ICOL   5.6 % CO
ICOG   5.1 % CO        1972   FTP     6.11   73.0   769.3    7.10     9.8
                       1975   FTP     5.50   67.9   742.4    7.32    10.2
OTHER TESTS:           HOT  START     5.04   63.6   717.7    7.54    10.6
          NONE         HFET

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN HOUSTON

```
                                                                  MPG
VEH                                  -----GRAMS PER MILE-----    FUEL
NO.  YR MAKE MODL CID TEST  TYPE    HC     CO     CO2    NOXC    ECON
----------------------------------------------------------------------
101  71 TOYO CORO  71 COLD TRANS  2,87   24,9   365,3   7,19    21,5
                      COLD  STAB  3,41   16,4   425,0   7,66    19.2
IHCL  2163PPM CARBON  HOT  TRANS  3,27   21.5   338,2   7,09    23,2
IHCG   400PPM HEXANE  HOT   STAB  3,50   15,4   401,0   6,94    20,3
ICOL  0,5 % CO
ICOG  0,5 % CO        1972   FTP  3,15   20,5   396,0   7,43    20,3
                      1975   FTP  3,26   19,6   388,4   7,40    20,7
OTHER TESTS:          HOT  START  3,39   18,4   370,4   7,01    21,6
        NONE          HFET


102  71 VOLK SEDA  97 COLD TRANS  9,94  103,8   350,1   2,08    16,3
                      COLD  STAB  6,10   59,3   422,6   1,71    16,6
IHCL  5031PPM CARBON  HOT  TRANS  4,63   52,2   350,5   2,14    19,8
IHCG  1180PPM HEXANE  HOT   STAB  6,62   63,7   442,8   1,77    15,7
ICOL  0,3 % CO
ICOG  0,7 % CO        1972   FTP  7,97   81,0   387,3   1,89    16,4
                      1975   FTP  6,50   66,7   387,4   1,91    17,3
OTHER TESTS:          HOT  START  5,65   58,1   397,9   1,95    17,5
        NONE          HFET


103  70 BUIC ELEC 455 COLD TRANS  6,77  126,9   750,7   6,18     9,1
                      COLD  STAB  6,27   87,8   742,0   5,49     9,9
IHCL  5333PPM CARBON  HOT  TRANS  4,48   51,9   659,5   8,09    11,8
IHCG   540PPM HEXANE  HOT   STAB  6,19   87,2   738,5   5,79     9,9
ICOL  5,5 % CO
ICOG  5,0 % CO        1972   FTP  6,51  106,8   746,2   5,83     9,5
                      1975   FTP  5,88   86,0   720,9   6,36    10,1
OTHER TESTS:          HOT  START  5,36   70,1   700,0   6,91    10,7
        NONE          HFET


104  70 CHEV CHEV 250 COLD TRANS  7,09   83,9   556,3   3,41    12,5
                      COLD  STAB  2,44   37,7   597,1   2,20    13,4
IHCL  2753PPM CARBON  HOT  TRANS  2,63   23,7   533,8   3,02    15,3
IHCG   240PPM HEXANE  HOT   STAB  2,97   37,7   584,0   2,25    13,6
ICOL  3,0 % CO
ICOG  2,4 % CO        1972   FTP  4,70   60,2   577,2   2,79    12,9
                      1975   FTP  3,46   43,5   571,0   2,68    13,6
OTHER TESTS:          HOT  START  2,80   30,9   559,5   2,62    14,4
        NONE          HFET

FUEL ECONOMY CALCULATIONS ASSUME A 1:1,85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN HOUSTON

```
                                                                    MPG
VEH                                   -----GRAMS PER MILE-----     FUEL
NO.  YR MAKE MODL CID TEST  TYPE     HC     CO     CO2    NOXC     ECON
-----------------------------------------------------------------------
105  70 CHEV CAMA 307 COLD TRANS   6.66   50.0   647.8   5.44     11.9
                      COLD  STAB   5.16   44.1   656.3   4.24     12.0
IHCL  5031PPM CARBON  HOT  TRANS   4.65   33.2   581.3   5.57     13.7
IHCG   400PPM HEXANE  HOT   STAB   6.57   51.8   625.8   3.99     12.2
ICOL  3.9 % CO
ICOG  2.8 % CO        1972   FTP   5.89   47.0   652.2   4.82     11.9
                      1975   FTP   5.33   42.3   633.7   4.86     12.4
OTHER TESTS:          HOT  START   5.64   42.8   604.1   4.76     12.9
        NONE          HFET


106  70 CHEV IMPA 350 COLD TRANS   4.92   57.9   752.3   5.30     10.3
                      COLD  STAB   3.15   49.0   815.6   4.37      9.8
IHCL  3084PPM CARBON  HOT  TRANS   2.60   28.9   687.7   5.62     12.0
IHCG   320PPM HEXANE  HOT   STAB   3.39   48.4   804.4   4.39     10.0
ICOL  3.9 % CO
ICOG  3.2 % CO        1972   FTP   4.02   53.3   784.8   4.82     10.1
                      1975   FTP   3.37   45.3   766.9   4.91     10.5
OTHER TESTS:          HOT  START   3.01   38.9   747.6   4.99     10.8
        NONE          HFET


107  70 CHEV IMPA 350 COLD TRANS   7.33  102.2   620.7   4.15     11.0
                      COLD  STAB   4.14   83.8   663.2   3.33     11.0
IHCL  3371PPM CARBON  HOT  TRANS   3.86   59.7   577.5   4.68     13.0
IHCG   370PPM HEXANE  HOT   STAB   3.88   79.9   647.6   3.20     11.3
ICOL  5.2 % CO
ICOG  4.5 % CO        1972   FTP   5.69   92.8   642.5   3.73     11.0
                      1975   FTP   4.73   81.0   630.5   3.88     11.5
OTHER TESTS:          HOT  START   3.87   70.0   613.5   3.92     12.1
        NONE          HFET


108  70 CHEV BELA 350 COLD TRANS   5.89  103.0   753.7   4.72      9.5
                      COLD  STAB   3.12   54.8   796.3   3.79      9.9
IHCL  2407PPM CARBON  HOT  TRANS   2.98   46.4   675.7   4.78     11.7
IHCG   180PPM HEXANE  HOT   STAB   2.98   48.7   783.2   3.60     10.2
ICOL  2.4 % CO
ICOG  2.1 % CO        1972   FTP   4.47   78.2   775.6   4.24      9.7
                      1975   FTP   3.66   62.6   754.0   4.26     10.3
OTHER TESTS:          HOT  START   2.98   47.6   730.9   4.17     10.9
        NONE          HFET

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS ON INDIVIDUAL VEHICLES IN HOUSTON

```
                                                                   MPG
VEH                                     -----GRAMS PER MILE-----  FUEL
NO.  YR MAKE MODL CID TEST  TYPE     HC     CO     CO2    NOXC   ECON
-----------------------------------------------------------------------
109  70 CHEV STAW 400 COLD TRANS   5.05  102.2   906.4   6.04    8.2
                      COLD  STAB   1.94   30.9   950.7   4.66    8.8
IHCL  1598PPM CARBON  HOT  TRANS   2.81   29.9   812.8   6.12   10.2
IHCG   120PPM HEXANE  HOT   STAB   2.21   36.4   919.8   4.27    9.0
ICOL  0.1 % CO
ICOG  1.3 % CO        1972   FTP   3.46   65.6   929.1   5.33    8.5
                      1975   FTP   2.84   45.5   903.1   5.35    9.0
OTHER TESTS:          HOT  START   2.50   33.3   867.7   5.17    9.6
       NONE           HFET


110  70 DODG POLA 383 COLD TRANS   5.56   67.7   617.3   4.89   12.0
                      COLD  STAB   2.79   44.6   668.2   3.50   11.9
IHCL  2113PPM CARBON  HOT  TRANS   2.44   26.7   580.5   5.79   14.1
IHCG   370PPM HEXANE  HOT   STAB   2.73   45.6   653.1   3.86   12.1
ICOL  2.3 % CO
ICOG  2.3 % CO        1972   FTP   4.13   55.9   643.4   4.18   11.9
                      1975   FTP   3.27   44.5   633.2   4.43   12.4
OTHER TESTS:          HOT  START   2.59   36.4   617.8   4.80   13.0
       NONE           HFET


111  70 FORD MAVE 200 COLD TRANS   4.42   34.9   429.3   8.79   17.8
                      COLD  STAB   2.67   36.2   446.7   6.10   17.3
IHCL  2515PPM CARBON  HOT  TRANS   2.66   21.6   383.3   6.59   20.8
IHCG   247PPM HEXANE  HOT   STAB   2.43   35.3   430.2   4.73   18.0
ICOL  3.6 % CO
ICOG  3.4 % CO        1972   FTP   3.52   35.6   438.2   7.41   17.6
                      1975   FTP   3.03   31.9   425.5   6.80   18.3
OTHER TESTS:          HOT  START   2.54   28.6   407.4   5.64   19.3
       NONE           HFET


112  70 FORD FAIR 302 COLD TRANS  11.82   90.8   659.6   6.82   10.6
                      COLD  STAB   7.27   82.4   704.3   4.71   10.4
IHCL  2012PPM CARBON  HOT  TRANS   6.47   59.9   573.1   5.93   12.9
IHCG   150PPM HEXANE  HOT   STAB   6.38   79.8   685.7   4.37   10.7
ICOL  3.4 % CO
ICOG  2.5 % CO        1972   FTP   9.49   86.5   682.5   5.74   10.5
                      1975   FTP   8.00   77.9   658.6   5.49   11.0
OTHER TESTS:          HOT  START   6.42   70.1   630.9   5.13   11.7
       NONE           HFET

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN HOUSTON

```
VEH                                                                  MPG
                                      -----GRAMS PER MILE-----      FUEL
NO.  YR MAKE MODL CID TEST   TYPE    HC     CO     CO2    NOXC      ECON
------------------------------------------------------------------------
113   70 FORD CUST 351 COLD TRANS   8.06  145.3   668.4   3.98       9.6
                       COLD  STAB   2.52   23.0   829.0   4.81      10.2
IHCL    812PPM CARBON  HOT  TRANS   2.77   22.4   669.9   6.09      12.4
IHCG     90PPM HEXANE  HOT   STAB   2.38   22.0   802.6   4.61      10.5
ICOL   0.1 % CO
ICOG   0.1 % CO        1972   FTP   5.21   82.5   750.9   4.41       9.9
                       1975   FTP   3.75   48.4   751.3   4.99      10.6
OTHER TESTS:           HOT  START   2.57   22.2   738.0   5.33      11.4
          NONE         HFET


114  70 FORD MUST 351  COLD TRANS   7.49   83.4   698.3   6.77      10.4
                       COLD  STAB   6.21   97.7   669.3   5.28      10.5
IHCL   4226PPM CARBON  HOT  TRANS   5.23   54.9   603.2   7.10      12.6
IHCG    320PPM HEXANE  HOT   STAB   5.84  103.8   645.2   4.79      10.7
ICOL   6.2 % CO
ICOG   4.9 % CO        1972   FTP   6.84   90.7   683.4   6.00      10.5
                       1975   FTP   6.21   82.8   657.0   6.10      11.0
OTHER TESTS:           HOT  START   5.55   80.0   624.7   5.92      11.6
          NONE         HFET


115  70 FORD STAW 390  COLD TRANS   7.27  104.1   685.3   6.84      10.2
                       COLD  STAB   3.01   26.3   725.5   6.43      11.4
IHCL   2314PPM CARBON  HOT  TRANS   3.77   27.4   629.7   9.31      13.0
IHCG    400PPM HEXANE  HOT   STAB   3.34   42.5   691.1   6.32      11.6
ICOL   0.6 % CO
ICOG   0.5 % CO        1972   FTP   5.09   64.2   706.0   6.63      10.8
                       1975   FTP   4.11   42.9   690.5   7.32      11.5
OTHER TESTS:           HOT  START   3.55   35.1   661.2   7.78      12.2
          NONE         HFET


116  70 MERC MARQ 429  COLD TRANS   8.94  143.4   785.7  11.52       8.5
                       COLD  STAB   5.11   89.4   799.6   9.32       9.3
IHCL   4588PPM CARBON  HOT  TRANS   5.23   60.0   643.3  11.53      11.8
IHCG    330PPM HEXANE  HOT   STAB   4.97  107.2   717.6   7.52       9.8
ICOL   6.5 % CO
ICOG   5.1 % CO        1972   FTP   6.97  115.7   792.8  10.39       8.9
                       1975   FTP   5.94   92.6   753.3  10.39       9.7
OTHER TESTS:           HOT  START   5.10   84.3   681.4   9.47      10.7
          NONE         HFET

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS ON INDIVIDUAL VEHICLES IN HOUSTON

```
                                                                  MPG
VEH                                   -----GRAMS PER MILE-----   FUEL
NO.  YR MAKE MODL CID TEST   TYPE    HC     CO    CO2   NOXC   ECON
----------------------------------------------------------------------
117   70 OLDS CUTL 350 COLD TRANS  5.91  106.5  791.6   4.24    9.1
                       COLD  STAB  2.99   62.8  812.5   3.69    9.6
IHCL  1965PPM CARBON   HOT  TRANS  3.22   53.4  691.7   4.33   11.3
IHCG   185PPM HEXANE   HOT   STAB  2.95   61.2  769.2   3.09   10.1
ICOL  2.1 % CO
ICOG  1.8 % CO         1972   FTP  4.41   84.1  802.3   3.96    9.4
                       1975   FTP  3.66   69.4  774.6   3.98    9.9
OTHER TESTS:           HOT  START  3.08   57.4  731.5   3.69   10.7
        NONE           HFET


118   70 OLDS DFTL 455 COLD TRANS  4.70   93.1  673.4   5.18   10.6
                       COLD  STAB  3.83   80.3  710.5   4.04   10.5
IHCL  1715PPM CARBON   HOT  TRANS  3.05   46.8  622.0   5.64   12.6
IHCG   140PPM HEXANE   HOT   STAB  3.79   80.1  709.0   4.06   10.5
ICOL  2.2 % CO
ICOG  1.8 % CO         1972   FTP  4.25   86.5  692.5   4.60   10.5
                       1975   FTP  3.80   73.7  678.2   4.72   11.0
OTHER TESTS:           HOT  START  3.43   63.9  666.6   4.83   11.4
        NONE           HFET


119   70 PLYM FURY 318 COLD TRANS  5.17   87.7  629.0   4.11   11.3
                       COLD  STAB  2.00   14.8  695.6   3.88   12.2
IHCL  1106PPM CARBON   HOT  TRANS  1.88   20.6  592.4   5.03   14.1
IHCG   180PPM HEXANE   HOT   STAB  1.65   12.3  655.6   4.21   13.0
ICOL  0.2 % CO
ICOG  0.3 % CO         1972   FTP  3.54   50.3  663.2   3.99   11.8
                       1975   FTP  2.63   31.7  653.0   4.25   12.5
OTHER TESTS:           HOT  START  1.76   16.3  624.9   4.61   13.5
        NONE           HFET


120   70 PLYM FURY 318 COLD TRANS  6.04   76.0  636.4   7.92   11.5
                       COLD  STAB  3.92   54.8  644.6  10.03   11.9
IHCL  2908PPM CARBON   HOT  TRANS  3.63   39.9  574.3   9.63   13.7
IHCG   300PPM HEXANE   HOT   STAB  3.67   45.0  647.3   9.45   12.2
ICOL  2.5 % CO
ICOG  2.6 % CO         1972   FTP  4.95   65.1  640.6   9.00   11.7
                       1975   FTP  4.28   55.1  623.4   9.48   12.3
OTHER TESTS:           HOT  START  3.65   42.5  611.8   9.54   12.9
        NONE           HFET

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

```
                      APPENDIX C,CONT'D

           LISTING OF FEDERAL TEST PROCEDURE RESULTS
              ON INDIVIDUAL VEHICLES IN HOUSTON

VEH                                                                MPG
                                       -----GRAMS PER MILE-----   FUEL
NO.  YR MAKE MODL CID TEST   TYPE     HC     CO     CO2    NOXC   ECON
-----------------------------------------------------------------------
121   70 PONT FIRE 350 COLD TRANS   5.52   57.7   705.3   5.87   10.9
                       COLD  STAB   4.53   39.2   691.8   5.98   11.6
IHCL   2364PPM CARBON  HOT  TRANS   3.75   30.0   595.1   6.59   13.6
IHCG    285PPM HEXANE  HOT   STAB   4.48   37.2   665.6   5.74   12.0
ICOL   0.9 % CO
ICOG   0.9 % CO        1972   FTP   5.01   48.2   698.4   5.93   11.2
                       1975   FTP   4.52   40.5   667.8   6.13   11.9
OTHER TESTS:           HOT  START   4.12   33.7   631.2   6.16   12.7
         NONE          HFET


122   70 PONT CATA 400 COLD TRANS   8.13   96.7   938.1   6.05    8.0
                       COLD  STAB   6.05  124.4   864.5   5.08    8.2
IHCL   7647PPM CARBON  HOT  TRANS   4.55   74.8   769.3   6.26    9.8
IHCG    580PPM HEXANE  HOT   STAB   5.98  118.3   835.2   5.19    8.5
ICOL   6.5 % CO
ICOG   5.6 % CO        1972   FTP   7.06  110.9   900.3   5.55    8.1
                       1975   FTP   6.07  104.8   853.5   5.61    8.6
OTHER TESTS:           HOT  START   5.29   97.2   803.1   5.71    9.1
         NONE          HFET


123   70 TOYO STAW 116 COLD TRANS   3.83   36.0   458.5  11.61   16.8
                       COLD  STAB   3.96   58.4   429.4  10.03   16.6
IHCL  10052PPM CARBON  HOT  TRANS  11.96   44.5   441.6  12.14   16.2
IHCG    810PPM HEXANE  HOT   STAB  14.46   58.8   442.7   8.86   15.3
ICOL   6.5 % CO
ICOG   5.3 % CO        1972   FTP   3.90   47.5   443.6  10.80   16.7
                       1975   FTP   6.15   49.8   438.8  10.95   16.5
OTHER TESTS:           HOT  START  13.24   51.9   442.2  10.46   15.7
         NONE          HFET


124   70 VOLK SEDA  97 COLD TRANS   5.05   52.2   377.1   5.02   18.7
                       COLD  STAB   4.97   53.5   376.5   4.22   18.6
IHCL   2918PPM CARBON  HOT  TRANS   4.33   47.6   327.0   4.45   21.4
IHCG    220PPM HEXANE  HOT   STAB   4.96   48.9   422.8   4.21   17.2
ICOL   2.2 % CO
ICOG   2.9 % CO        1972   FTP   5.01   52.9   376.8   4.61   18.7
                       1975   FTP   4.81   51.6   362.9   4.45   19.3
OTHER TESTS:           HOT  START   4.65   48.3   376.2   4.32   19.0
         NONE          HFET

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS ON INDIVIDUAL VEHICLES IN HOUSTON

```
VEH                                                                     MPG
NO.  YR MAKE MODL CID TEST  TYPE   -----GRAMS PER MILE-----            FUEL
                                     HC      CO      CO2    NOXC       ECON
-----------------------------------------------------------------------------
125  69 AMMO JAVE 290 COLD TRANS   4.52    46.6    587.2    7.11       13.2
                      COLD  STAB   3.36    43.2    572.0    4.56       13.6
IHCL  2515PPM CARBON  HOT  TRANS   3.29    33.1    507.7    7.83       15.6
IHCG   245PPM HEXANE  HOT   STAB   3.27    41.4    557.7    4.43       14.0
ICOL  3.7 % CO
ICOG  3.1 % CO        1972   FTP   3.93    44.9    579.4    5.80       13.4
                      1975   FTP   3.58    41.1    557.4    6.00       14.0
OTHER TESTS:          HOT  START   3.28    37.4    533.4    6.09       14.7
        NONE          HFET


126  69 BUIC SKYL 350 COLD TRANS   4.00    87.8    716.0   10.94       10.2
                      COLD  STAB   2.98    50.6    733.3    6.60       10.8
IHCL  2163PPM CARBON  HOT  TRANS   2.36    25.7    618.3   11.07       13.3
IHCG   210PPM HEXANE  HOT   STAB   2.91    49.0    697.8    7.22       11.3
ICOL  2.9 % CO
ICOG  2.6 % CO        1972   FTP   3.48    68.7    724.9    8.72       10.5
                      1975   FTP   3.02    51.5    697.8    8.75       11.3
OTHER TESTS:          HOT  START   2.64    37.6    659.1    9.09       12.2
        NONE          HFET


127  69 CHEV CAMA 250 COLD TRANS   6.81   106.7    582.5    8.30       11.5
                      COLD  STAB   2.75    30.3    633.5    7.77       12.9
IHCL  2076PPM CARBON  HOT  TRANS   2.78    15.0    558.1    9.52       15.0
IHCG   140PPM HEXANE  HOT   STAB   2.56    24.9    633.9    7.79       13.0
ICOL  1.4 % CO
ICOG  0.9 % CO        1972   FTP   4.73    67.5    608.7    8.03       12.2
                      1975   FTP   3.61    42.0    601.9    8.37       13.1
OTHER TESTS:          HOT  START   2.67    20.0    597.0    8.64       13.9
        NONE          HFET


128  69 CHEV STAW 307 COLD TRANS   9.66   142.5    574.5    5.36       10.7
                      COLD  STAB   7.08    92.8    585.3    5.62       11.8
IHCL  3340PPM CARBON  HOT  TRANS   6.33   121.0    501.9    4.45       12.5
IHCG   510PPM HEXANE  HOT   STAB   7.37   145.3    537.1    2.86       11.3
ICOL  3.9 % CO
ICOG  4.3 % CO        1972   FTP   8.34   117.0    580.0    5.50       11.2
                      1975   FTP   7.41   111.0    559.9    5.24       11.7
OTHER TESTS:          HOT  START   6.87   133.5    520.0    3.63       11.8
        NONE          HFET

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN HOUSTON

```
                                                                     MPG
VEH                                   -----GRAMS PER MILE-----      FUEL
NO.  YR MAKE MODL CID TEST  TYPE    HC     CO     CO2    NOXC      ECON
-------------------------------------------------------------------------
129  69 CHEV NOVA 307 COLD TRANS   7.04   86.4   541.7   7.15      12.7
                      COLD  STAB   3.37   31.4   577.4   6.48      13.9
IHCL  2867PPM CARBON  HOT  TRANS   3.11   24.8   514.6   8.29      15.7
IHCG   250PPM HEXANE  HOT   STAB   3.78   34.3   565.3   6.53      14.1
ICOL  2.8 % CO
ICOG  1.9 % CO        1972   FTP   5.15   58.1   560.0   6.81      13.3
                      1975   FTP   4.06   41.1   552.5   7.12      14.1
OTHER TESTS:          HOT  START   3.46   29.7   540.6   7.39      14.8
        NONE          HFET


130  69 CHEV IMPA 350 COLD TRANS   5.74   72.4   556.3   9.21      12.9
                      COLD  STAB   4.12   72.5   599.1   7.53      12.2
IHCL  2918PPM CARBON  HOT  TRANS   3.24   38.4   522.0  10.25      15.0
IHCG   620PPM HEXANE  HOT   STAB   4.05   70.2   592.1   7.80      12.4
ICOL  4.3 % CO
ICOG  3.4 % CO        1972   FTP   4.91   72.5   578.3   8.35      12.5
                      1975   FTP   4.21   63.0   568.7   8.64      13.0
OTHER TESTS:          HOT  START   3.66   54.7   557.9   8.99      13.5
        NONE          HFET


131  69 CHEV IMPA 350 COLD TRANS   5.38   70.1   589.9   3.28      12.4
                      COLD  STAB   4.57   57.0   658.6   2.32      11.6
IHCL  2717PPM CARBON  HOT  TRANS   4.43   73.1   571.6   3.18      12.7
IHCG   550PPM HEXANE  HOT   STAB   4.38   55.6   634.6   1.93      12.1
ICOL  0.3 % CO
ICOG  0.2 % CO        1972   FTP   4.97   63.4   625.2   2.78      12.0
                      1975   FTP   4.70   64.2   620.1   2.76      12.1
OTHER TESTS:          HOT  START   4.40   64.1   604.0   2.54      12.3
        A/C           HFET


132  69 CHEV STAW 396 COLD TRANS  16.61  217.1   546.4   4.16       9.4
                      COLD  STAB   5.70   84.5   525.2   4.21      13.1
IHCL  4025PPM CARBON  HOT  TRANS   4.64   68.0   949.3   4.53       8.3
IHCG   340PPM HEXANE  HOT   STAB   5.83   87.3   485.3   3.78      13.8
ICOL  3.0 % CO
ICOG  2.8 % CO        1972   FTP  11.01  149.0   535.5   4.19      11.0
                      1975   FTP   7.69  107.7   647.3   4.29      10.6
OTHER TESTS:          HOT  START   5.25   77.9   711.1   4.14      10.4
        NONE          HFET

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C.CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN HOUSTON

```
                                                                   MPG
VEH                                  -----GRAMS PER MILE-----     FUEL
NO.  YR MAKE MODL CID TEST   TYPE     HC     CO     CO2   NOXC    ECON
----------------------------------------------------------------------
133  69 CHRY TOWN 383 COLD  TRANS   7.96  117.4   724.0   5.97     9.5
                      COLD   STAB   5.09   64.7   775.2   6.78     9.9
IHCL  2767PPM CARBON  HOT   TRANS   5.13   77.0   659.6   6.70    11.1
IHCG   300PPM HEXANE  HOT    STAB   4.94   60.4   750.8   6.47    10.3
ICOL  2.8 % CO
ICOG  2.3 % CO        1972    FTP   6.49   90.3   750.3   6.38     9.7
                      1975    FTP   5.70   79.1   732.4   6.59    10.1
OTHER TESTS:          HOT   START   5.03   68.5   706.4   6.58    10.7
        A/C           HFET


134  69 DODG DART 225 COLD  TRANS   7.29  129.4   477.4   4.94    12.6
                      COLD   STAB   2.41   41.3   504.3   5.13    15.4
IHCL  2347PPM CARBON  HOT   TRANS   2.29   40.5   461.7   6.42    16.7
IHCG   200PPM HEXANE  HOT    STAB   2.33   39.9   492.9   5.18    15.8
ICOL  2.8 % CO
ICOG  2.5 % CO        1972    FTP   4.79   84.2   491.2   5.04    13.9
                      1975    FTP   3.40   59.5   486.8   5.45    15.0
OTHER TESTS:          HOT   START   2.31   40.2   477.7   5.78    16.2
        NONE          HFET


135  69 FORD STAW 302 COLD  TRANS   6.14   41.6   582.7  10.29    13.3
                      COLD   STAB   4.04   15.7   644.1  12.11    13.0
IHCL  1128PPM CARBON  HOT   TRANS   3.69   17.1   594.1  11.58    14.0
IHCG   170PPM HEXANE  HOT    STAB   3.72   13.1   644.2  11.67    13.1
ICOL  0.1 % CO
ICOG  0.1 % CO        1972    FTP   5.06   28.3   614.2  11.23    13.2
                      1975    FTP   4.39   21.5   617.4  11.58    13.3
OTHER TESTS:          HOT   START   3.71   15.0   619.8  11.63    13.5
        NONE          HFET


136  69 FORD MUST 302 COLD  TRANS   4.24   34.6   566.4   8.07    14.0
                      COLD   STAB   3.21   39.5   569.7   5.06    13.8
IHCL  2052PPM CARBON  HOT   TRANS   2.77   25.1   511.1   7.97    15.9
IHCG   285PPM HEXANE  HOT    STAB   3.07   33.7   561.7   5.07    14.2
ICOL  1.6 % CO
ICOG  1.6 % CO        1972    FTP   3.71   37.1   568.1   6.53    13.9
                      1975    FTP   3.30   34.5   552.8   6.50    14.4
OTHER TESTS:          HOT   START   2.92   29.5   537.1   6.48    15.0
        NONE          HFET

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN HOUSTON

```
                                                                       MPG
VEH                                       -----GRAMS PER MILE-----    FUEL
NO.   YR MAKE MODL CID TEST  TYPE     HC      CO      CO2    NOXC     FCON
--------------------------------------------------------------------------
137   69 FORD MUST 351 COLD TRANS   6.76    82.3    595.3  10.06      11.9
                       COLD  STAB   4.66    18.4    607.3   8.89      13.6
IHCL   3220PPM CARBON  HOT  TRANS   4.54    14.8    542.6  13.28      15.3
IHCG    270PPM HEXANE  HOT   STAB   4.72    16.3    597.8   8.92      13.9
ICOL   1.0 % CO
ICOG   0.6 % CO        1972   FTP   5.68    49.5    601.5   9.46      12.7
                       1975   FTP   5.06    30.8    586.9  10.36      13.6
OTHER TESTS:           HOT  START   4.63    15.6    570.9  11.04      14.5
         NONE          HFET


138   69 FORD STAW 351 COLD TRANS   4.39    29.2    858.5   8.83       9.7
                       COLD  STAB   4.55    18.9    857.8   6.74       9.8
IHCL   1811PPM CARBON  HOT  TRANS   4.22    22.1    711.5   9.09      11.7
IHCG    230PPM HEXANE  HOT   STAB   3.74    22.6    818.8   6.44      10.2
ICOL   0.1 % CO
ICOG   0.1 % CO        1972   FTP   4.48    23.9    858.1   7.76       9.8
                       1975   FTP   4.43    21.9    817.4   7.83      10.3
OTHER TESTS:           HOT  START   3.98    22.4    766.6   7.73      10.9
         NONE          HFET


139   69 FORD STAW 390 COLD TRANS   5.00    84.9    712.6  10.37      10.3
                       COLD  STAB   3.62    41.5    715.7   9.64      11.2
IHCL   5836PPM CARBON  HOT  TRANS   3.33    26.9    650.0  13.23      12.6
IHCG   1200PPM HEXANE  HOT   STAB   3.97    40.1    689.3   8.78      11.6
ICOL   0.1 % CO
ICOG   2.0 % CO        1972   FTP   4.29    62.6    714.2  10.00      10.7
                       1975   FTP   3.83    46.5    696.8  10.79      11.3
OTHER TESTS:           HOT  START   3.66    33.7    670.2  10.95      12.1
         A/C           HFET


140   69 MERC MONT 390 COLD TRANS   5.14    86.9    753.9   6.18       9.8
                       COLD  STAB   4.32   121.1    738.2   4.92       9.4
IHCL   2465PPM CARBON  HOT  TRANS   4.19    90.4    642.5   5.92      11.1
IHCG    300PPM HEXANE  HOT   STAB   4.46   128.7    732.1   4.77       9.4
ICOL   4.7 % CO
ICOG   3.8 % CO        1972   FTP   4.72   104.4    745.9   5.53       9.6
                       1975   FTP   4.45   105.4    715.0   5.46       9.9
OTHER TESTS:           HOT  START   4.33   110.1    688.5   5.33      10.1
         A/C           HFET

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN HOUSTON

```
                                                                      MPG
VEH                                    -----GRAMS PER MILE-----      FUEL
NO.  YR MAKE MODL CID TEST  TYPE    HC     CO      CO2    NOXC   ECON
---------------------------------------------------------------------------
141  69 OLDS DELT 455 COLD TRANS 10.65 207.0   615.3   3.84     9.1
                      COLD  STAB  4.47 147.4   680.1   2.67     9.6
IHCL  4427PPM CARBON  HOT  TRANS  3.54 102.7   589.3   4.50    11.6
IHCG   520PPM HEXANE  HOT   STAB  4.43 145.8   668.4   2.59     9.7
ICOL  6.4 % CO
ICOG  5.8 % CO        1972   FTP  7.48 176.4   648.6   3.24     9.3
                      1975   FTP  5.50 147.5   641.4   3.42    10.0
OTHER TESTS:          HOT  START  3.99 124.8   629.9   3.52    10.6
        A/C           HFET


142  69 PLYM BARR 318 COLD TRANS  4.22   51.4  492.3   8.08    15.1
                      COLD  STAB  4.11   73.4  531.1   6.25    13.5
IHCL  2347PPM CARBON  HOT  TRANS  3.27   44.8  472.7   7.97    16.0
IHCG   255PPM HEXANE  HOT   STAB  4.13   75.1  547.3   5.67    13.1
ICOL  3.6 % CO
ICOG  2.6 % CO        1972   FTP  4.16   62.7  512.2   7.14    14.2
                      1975   FTP  3.90   60.9  506.7   7.11    14.4
OTHER TESTS:          HOT  START  3.71   60.4  511.0   6.79    14.4
        NONE          HFET


143  69 PONT LEMA 350 COLD TRANS  5.32   47.9  778.5   8.81    10.2
                      COLD  STAB  4.25   21.1  741.4   8.10    11.3
IHCL  1534PPM CARBON  HOT  TRANS  4.05   15.7  643.6   9.46    13.0
IHCG   160PPM HEXANE  HOT   STAB  4.49   15.2  720.8   8.13    11.7
ICOL  0.1 % CO
ICOG  0.1 % CO        1972   FTP  4.77   34.1  759.4   8.44    10.7
                      1975   FTP  4.42   25.2  722.0   8.63    11.4
OTHER TESTS:          HOT  START  4.28   15.5  683.2   8.77    12.3
        NONE          HFET


144  69 PONT CATA 400 COLD TRANS  5.11   51.8  629.4  11.75    12.2
                      COLD  STAB  4.12   42.1  629.2  10.23    12.5
IHCL  2817PPM CARBON  HOT  TRANS  3.47   28.2  564.2  12.82    14.3
IHCG   450PPM HEXANE  HOT   STAB  4.06   41.5  610.3  10.56    12.9
ICOL  2.4 % CO
ICOG  2.1 % CO        1972   FTP  4.60   46.9  629.3  10.97    12.4
                      1975   FTP  4.15   40.3  611.2  11.27    12.9
OTHER TESTS:          HOT  START  3.77   35.0  587.9  11.66    13.6
        NONE          HFET

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN HOUSTON

```
                                                                     MPG
VEH                                       -----GRAMS PER MILE-----  FUEL
NO.  YR MAKE MODL CID TEST  TYPE     HC     CO     CO2   NOXC   ECON
------------------------------------------------------------------------
145  69 VOLK SEDA  91 COLD TRANS   6.83   48.7   391.8   6.50   18.1
                      COLD  STAB   5.95   60.7   420.5   4.47   16.6
IHCL  1203PPM CARBON  HOT  TRANS   4.20   43.5   347.3   5.30   20.7
IHCG   125PPM HEXANE  HOT   STAB   5.62   57.2   409.7   4.53   17.2
ICOL  2.3 % CO
ICOG  1.9 % CO        1972   FTP   6.38   54.9   406.5   5.46   17.3
                      1975   FTP   5.65   53.4   394.2   5.12   17.9
OTHER TESTS:          HOT  START   4.93   50.6   379.3   4.90   18.7
        NONE          HFET


146  68 AMMO RAMB 199 COLD TRANS  11.22  133.5   504.9   4.19   11.8
                      COLD  STAB   9.38  161.8   428.2   1.94   12.5
IHCL  4779PPM CARBON  HOT  TRANS   7.16  125.0   374.3   2.22   15.0
IHCG   345PPM HEXANE  HOT   STAB   8.74  155.3   408.5   1.79   13.0
ICOL  5.9 % CO
ICOG  5.4 % CO        1972   FTP  10.27  148.0   465.5   3.04   12.1
                      1975   FTP   9.15  145.7   429.3   2.49   12.9
OTHER TESTS:          HOT  START   7.97  140.6   391.8   2.00   13.9
        NONE          HFET


147  68 BUIC ELEC 430 COLD TRANS   6.18  101.5   759.1   6.06    9.5
                      COLD  STAB   5.39  118.5   772.8   3.93    9.1
IHCL  3733PPM CARBON  HOT  TRANS   4.03   67.5   657.7   6.00   11.4
IHCG   300PPM HEXANE  HOT   STAB   5.35  114.2   754.1   3.69    9.3
ICOL  5.7 % CO
ICOG  5.5 % CO        1972   FTP   5.77  110.2   766.1   4.97    9.3
                      1975   FTP   5.18  100.8   738.0   4.95    9.7
OTHER TESTS:          HOT  START   4.71   91.4   707.2   4.81   10.3
        NONE          HFET


148  68 CADI DEVI 472 COLD TRANS  35.12   87.1   838.9   6.21    8.2
                      COLD  STAB  30.44   41.6   787.7   5.51    9.3
IHCL  7959PPM CARBON  HOT  TRANS  27.06   43.4   695.4   6.72   10.4
IHCG  1680PPM HEXANE  HOT   STAB  29.03   35.6   765.3   5.61    9.7
ICOL  0.2 % CO
ICOG  0.3 % CO        1972   FTP  32.72   63.7   812.6   5.85    8.7
                      1975   FTP  30.48   51.6   772.8   5.99    9.3
OTHER TESTS:          HOT  START  28.07   39.4   731.3   6.15   10.1
        NONE          HFET

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C, CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN HOUSTON

```
                                                                    MPG
VEH                                   -----GRAMS PER MILE-----     FUEL
NO.  YR MAKE MODL CID TEST  TYPE    HC     CO     CO2    NOXC     ECON
-----------------------------------------------------------------------
149  68 CHEV CAMA 230 COLD TRANS 30.36 271.0   461.0    3.39      9.0
                      COLD  STAB  3.79  70.8   519.5    5.85     13.8
IHCL  3572PPM CARBON  HOT  TRANS  8.42 125.6   425.8    5.36     13.7
IHCG   420PPM HEXANE  HOT   STAB  4.41  69.4   475.6    5.72     14.8
ICOL  5.5 % CO
ICOG  4.7 % CO        1972   FTP 16.72 168.2   491.1    4.65     11.0
                      1975   FTP 10.64 127.9   481.3    5.20     12.4
OTHER TESTS:          HOT  START  6.36  96.7   451.4    5.54     14.2
        NONE          HFET


150  68 CHEV BELA 307 COLD TRANS  8.66 106.2   648.3    8.63     10.5
                      COLD  STAB  7.62  78.1   625.2    7.02     11.5
IHCL  9559PPM CARBON  HOT  TRANS  6.31  84.4   572.2    7.32     12.2
IHCG   760PPM HEXANE  HOT   STAB  8.63  92.6   609.7    5.94     11.3
ICOL  6.5 % CO
ICOG  5.6 % CO        1972   FTP  8.13  91.8   636.5    7.80     11.0
                      1975   FTP  7.47  85.7   615.3    7.44     11.5
OTHER TESTS:          HOT  START  7.50  88.6   591.5    6.61     11.8
        NONE          HFET


151  68 CHEV BELA 327 COLD TRANS 11.67 193.2   648.5    5.32      9.0
                      COLD  STAB  6.80 151.1   662.7    3.88      9.6
IHCL  3421PPM CARBON  HOT  TRANS  8.62  99.6   612.4    6.59     11.1
IHCG   330PPM HEXANE  HOT   STAB  6.45 137.5   670.9    4.10      9.8
ICOL  4.9 % CO
ICOG  4.2 % CO        1972   FTP  9.17 171.5   655.8    4.58      9.3
                      1975   FTP  8.32 145.6   645.8    4.94      9.9
OTHER TESTS:          HOT  START  7.50 119.1   642.4    5.31     10.4
        NONE          HFET


152  68 CHEV MALI 307 COLD TRANS  7.44  82.6   590.9    8.46     11.9
                      COLD  STAB  6.95  23.5   584.8    6.61     13.8
IHCL 10052PPM CARBON  HOT  TRANS  5.56  26.3   536.4    8.49     14.9
IHCG  1800PPM HEXANE  HOT   STAB  7.29  23.4   573.0    6.22     14.0
ICOL  0.4 % CO
ICOG  0.4 % CO        1972   FTP  7.19  52.3   587.8    7.51     12.8
                      1975   FTP  6.67  36.7   572.7    7.52     13.6
OTHER TESTS:          HOT  START  6.45  24.9   555.2    7.32     14.4
        NONE          HFET

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN HOUSTON

```
                                                                   MPG
VEH                                     -----GRAMS PER MILE-----  FUEL
NO.  YR MAKE MODL CID TEST  TYPE    HC     CO     CO2    NOXC    ECON
-----------------------------------------------------------------------
153  68 CHEV CAPR 396 COLD TRANS  7.71   60.6   875.4 13.09      8.9
                      COLD  STAB  5.46   39.2   827.2 11.87      9.8
IHCL  2213PPM CARBON  HOT  TRANS  5.13   23.2   741.1 14.40     11.2
IHCG   255PPM HEXANE  HOT   STAB  5.57   47.5   809.1 10.47      9.8
ICOL  2.1 % CO
ICOG  1.3 % CO        1972   FTP  6.56   49.6   850.7 12.46      9.3
                      1975   FTP  5.84   39.2   813.4 12.83      9.9
OTHER TESTS:          HOT  START  5.35   35.7   776.0 12.38     10.5
        NONE          HFET


154  68 DODG POLA 383 COLD TRANS  9.07  137.0   708.9  5.15      9.3
                      COLD  STAB  4.06   77.1   719.3  5.56     10.4
IHCL  2465PPM CARBON  HOT  TRANS  3.60   53.2   642.8  6.75     12.0
IHCG   260PPM HEXANE  HOT   STAB  4.30   73.6   698.1  5.68     10.7
ICOL  4.4 % CO
ICOG  3.7 % CO        1972   FTP  6.49  106.3   714.2  5.36      9.8
                      1975   FTP  4.98   83.0   695.9  5.80     10.5
OTHER TESTS:          HOT  START  3.96   63.7   671.2  6.20     11.3
        NONE          HFET


155  68 FORD MUST 200 COLD TRANS  3.71   50.7   566.5 13.67     13.5
                      COLD  STAB  2.55   32.0   548.5 11.09     14.6
IHCL  1760PPM CARBON  HOT  TRANS  2.33   21.2   514.8 14.07     16.0
IHCG   130PPM HEXANE  HOT   STAB  2.33   23.9   550.7 10.74     14.9
ICOL  0.8 % CO
ICOG  0.6 % CO        1972   FTP  3.12   41.1   557.2 12.34     14.0
                      1975   FTP  2.73   32.9   542.9 12.46     14.7
OTHER TESTS:          HOT  START  2.33   22.6   533.2 12.36     15.4
        NONE          HFET


156  68 FORD MUST 289 COLD TRANS  6.53   58.3   602.2 10.22     12.4
                      COLD  STAB  5.42   76.1   595.1  8.75     12.1
IHCL  5333PPM CARBON  HOT  TRANS  4.61   55.5   550.4  9.50     13.6
IHCG   430PPM HEXANE  HOT   STAB  5.34   85.9   595.1  8.05     11.9
ICOL  6.5 % CO
ICOG  5.8 % CO        1972   FTP  5.96   67.4   598.5  9.47     12.3
                      1975   FTP  5.43   66.6   584.2  9.27     12.6
OTHER TESTS:          HOT  START  4.98   71.1   573.4  8.75     12.7
        NONE          HFET

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

```
                        APPENDIX C,CONT'D

              LISTING OF FEDERAL TEST PROCEDURE RESULTS
                 ON INDIVIDUAL VEHICLES IN HOUSTON

                                                                     MPG
VEH                                     -----GRAMS PER MILE-----    FUEL
NO.  YR MAKE MODL CID TEST  TYPE    HC     CO     CO2   NOXC        ECON
-------------------------------------------------------------------------
157  68 FORD FAIR 302 COLD TRANS  4.51   72.3   707.2   5.28   10.6
                      COLD  STAB  6.03   18.2   636.1   8.29   13.0
IHCL  5635PPM CARBON  HOT  TRANS  4.30   18.3   522.3   9.84   15.7
IHCG   240PPM HEXANE  HOT   STAB  4.88   20.0   617.8  10.46   13.4
ICOL  0.4 % CO
ICOG  0.4 % CO        1972   FTP  5.29   44.5   670.7   6.83   11.7
                      1975   FTP  5.23   29.5   619.4   8.09   13.0
OTHER TESTS:          HOT  START  4.60   19.1   571.4  10.16   14.4
        NONE          HFET


158  68 FORD STAW 390 COLD TRANS  8.73  171.7   745.3   4.43    8.5
                      COLD  STAB  4.41   79.6   801.8   5.01    9.4
IHCL  2257PPM CARBON  HOT  TRANS  5.73   59.1   708.1   6.78   10.8
IHCG   225PPM HEXANE  HOT   STAB  4.55   88.1   773.1   4.59    9.6
ICOL  2.1 % CO
ICOG  2.4 % CO        1972   FTP  6.51  124.4   774.3   4.73    9.0
                      1975   FTP  5.68   93.2   764.0   5.38    9.6
OTHER TESTS:          HOT  START  5.12   74.0   741.5   5.66   10.2
        NONE          HFET


159  68 MERC STAW 390 COLD TRANS 12.68  170.0   767.7   8.31    8.3
                      COLD  STAB 14.81  198.3   728.6   6.24    8.2
IHCL 10052PPM CARBON  HOT  TRANS  9.68  131.9   660.5   8.35    9.9
IHCG   750PPM HEXANE  HOT   STAB 13.64  186.1   707.1   6.57    8.5
ICOL  6.5 % CO
ICOG  7.4 % CO        1972   FTP 13.77  184.5   747.6   7.25    8.2
                      1975   FTP 12.94  173.9   717.9   7.26    8.6
OTHER TESTS:          HOT  START 11.71  159.7   684.4   7.44    9.1
        NONE          HFET


160  68 OLDS CUTS 350 COLD TRANS  8.45  115.3   697.4   7.58    9.8
                      COLD  STAB  5.34   87.4   703.9   5.13   10.3
IHCL  3622PPM CARBON  HOT  TRANS  4.21   54.6   640.6   7.71   12.0
IHCG   380PPM HEXANE  HOT   STAB  5.31   91.2   699.9   4.96   10.3
ICOL  3.9 % CO
ICOG  3.6 % CO        1972   FTP  6.85  100.9   700.7   6.32   10.1
                      1975   FTP  5.67   84.1   685.0   6.36   10.6
OTHER TESTS:          HOT  START  4.78   73.4   671.0   6.30   11.1
        NONE          HFET

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN HOUSTON

```
                                                                MPG
VEH                                  -----GRAMS PER MILE-----  FUEL
NO.  YR MAKE MODL CID TEST  TYPE   HC     CO     CO2    NOXC   ECON
-------------------------------------------------------------------
161  68 PLYM FURY 318 COLD TRANS  8.23  162.4   394.3   1.10   13.1
                      COLD  STAB  4.11   43.6   573.5   4.23   13.5
IHCL  1992PPM CARBON  HOT  TRANS  3.69   44.4   505.6   5.20   15.1
IHCG   260PPM HEXANE  HOT   STAB  3.78   43.5   592.0   3.76   13.2
ICOL  1.3 % CO
ICOG  1.2 % CO        1972   FTP  6.12  101.4   486.3   2.71   13.3
                      1975   FTP  4.86   68.7   517.2   3.84   13.9
OTHER TESTS:          HOT  START  3.74   43.9   550.0   4.46   14.1
        NONE          HFET


162  68 PONT CATA 400 COLD TRANS  7.01   80.2   867.3   5.90    8.7
                      COLD  STAB  5.46   72.9   797.0   4.74    9.6
IHCL  6742PPM CARBON  HOT  TRANS  5.97   52.7   722.6   5.80   10.8
IHCG   495PPM HEXANE  HOT   STAB  5.56   77.6   773.6   4.26    9.7
ICOL  5.5 % CO
ICOG  5.0 % CO        1972   FTP  6.22   76.4   831.2   5.30    9.1
                      1975   FTP  5.93   68.8   791.1   5.28    9.7
OTHER TESTS:          HOT  START  5.76   65.5   748.8   5.01   10.2
        NONE          HFET


163  68 VOLK SEDA  91 COLD TRANS  9.35  108.6   317.6   3.88   17.1
                      COLD  STAB 12.29  153.7   378.2   3.34   13.5
IHCL 10052PPM CARBON  HOT  TRANS  8.68  109.1   315.0   3.42   17.3
IHCG  1320PPM HEXANE  HOT   STAB 13.84  141.3   303.8   1.91   15.6
ICOL  6.5 % CO
ICOG  6.2 % CO        1972   FTP 10.86  131.7   348.7   3.60   15.0
                      1975   FTP 10.67  131.9   348.0   3.47   15.1
OTHER TESTS:          HOT  START 11.33  125.6   309.2   2.64   16.4
        NONE          HFET


164  67 AMMO REBE 232 COLD TRANS 11.47   89.9   580.7   6.25   11.7
                      COLD  STAB  4.60   89.3   538.5   4.61   12.8
IHCL  1519PPM CARBON  HOT  TRANS  6.07   69.8   524.5   6.44   13.6
IHCG   130PPM HEXANE  HOT   STAB  4.28   93.5   527.7   4.44   12.9
ICOL  1.2 % CO
ICOG  0.7 % CO        1972   FTP  7.94   89.6   559.0   5.41   12.2
                      1975   FTP  6.45   84.0   543.4   5.46   12.8
OTHER TESTS:          HOT  START  5.15   81.9   526.2   5.42   13.2
        NONE          HFET

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN HOUSTON

```
VEH                                                                    MPG
NO.  YR MAKE MODL CID TEST   TYPE    -----GRAMS PER MILE-----         FUEL
                                      HC     CO     CO2    NOXC       ECON
--------------------------------------------------------------------------
165  67 BUIC LESA 340 COLD  TRANS  10.26  167.2   676.2   2.72         9.1
                      COLD   STAB   8.09  197.2   706.7   1.67         8.5
IHCL  7496PPM CARBON  HOT   TRANS   6.71  137.8   584.2   2.67        10.8
IHCG   440PPM HEXANE  HOT    STAB   7.56  201.9   659.4   1.38         8.9
ICOL  6.5 % CO
ICOG  7.0 % CO        1972    FTP   9.15  182.6   691.9   2.18         8.8
                      1975    FTP   8.16  174.4   666.4   2.17         9.2
OTHER TESTS:          HOT   START   7.15  170.7   622.8   2.01         9.7
        NONE          HFET


166  67 CADI DEVI 429 COLD  TRANS   9.86  150.2   895.0   4.45         7.6
                      COLD   STAB   6.16  120.4   833.4   3.60         8.5
IHCL  2817PPM CARBON  HOT   TRANS   6.62  108.3   780.5   4.04         9.1
IHCG   250PPM HEXANE  HOT    STAB   5.68  103.0   839.1   4.02         8.7
ICOL  3.5 % CO
ICOG  3.0 % CO        1972    FTP   7.96  134.9   863.4   4.01         8.1
                      1975    FTP   7.06  123.2   831.6   3.90         8.5
OTHER TESTS:          HOT   START   6.13  105.5   810.6   4.03         8.9
        NONE          HFET


167  67 CHEV CHEL 250 COLD  TRANS  12.10  120.2   487.6   6.10        12.4
                      COLD   STAB   9.58   99.3   504.9   5.02        12.8
IHCL 10052PPM CARBON  HOT   TRANS   8.21   72.0   449.3   6.66        15.1
IHCG   450PPM HEXANE  HOT    STAB  10.69  107.9   496.2   5.18        12.7
ICOL  6.5 % CO
ICOG  5.0 % CO        1972    FTP  10.81  109.5   496.5   5.54        12.6
                      1975    FTP   9.73   96.1   485.8   5.70        13.3
OTHER TESTS:          HOT   START   9.48   90.4   473.3   5.90        13.7
        NONE          HFET


168  67 CHEV IMPA 283 COLD  TRANS  13.30  109.6   641.8   6.37        10.4
                      COLD   STAB  12.72   67.7   600.3   5.48        11.9
IHCL 10052PPM CARBON  HOT   TRANS   8.48   67.5   558.6   6.63        12.8
IHCG  1350PPM HEXANE  HOT    STAB  11.29   63.0   578.9   5.20        12.4
ICOL  0.4 % CO
ICOG  0.3 % CO        1972    FTP  13.00   88.1   620.5   5.91        11.1
                      1975    FTP  11.67   76.4   597.4   5.98        11.8
OTHER TESTS:          HOT   START   9.93   65.2   569.0   5.90        12.6
        NONE          HFET

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C, CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN HOUSTON

```
                                                                     MPG
VEH                                   -----GRAMS PER MILE-----      FUEL
NO.  YR MAKE MODL CID TEST  TYPE    HC     CO     CO2    NOXC   ECON
-----------------------------------------------------------------------
169  67 CHEV BISC 283 COLD TRANS 20.82 193.0   590.3   4.81    9.2
                      COLD  STAB 19.52 184.8   588.6   3.65    9.4
IHCL 10052PPM CARBON  HOT  TRANS 12.60 126.4   549.1   5.46   11.3
IHCG  1020PPM HEXANE  HOT   STAB 17.32 176.6   571.7   3.78    9.8
ICOL  6.5 % CO
ICOG  7.4 % CO        1972   FTP 20.15 188.7   589.4   4.21    9.3
                      1975   FTP 17.87 170.3   578.0   4.39    9.8
OTHER TESTS:          HOT  START 15.03 152.2   560.7   4.60   10.5
        NONE          HFET


170  67 CHEV CAPR 327 COLD TRANS  7.24  75.6   624.4   4.72   11.6
                      COLD  STAB  6.29  88.2   578.8   2.68   12.0
IHCL  4800PPM CARBON  HOT  TRANS  6.12  64.0   556.2   4.54   13.1
IHCG   600PPM HEXANE  HOT   STAB  5.84  83.2   562.0   2.57   12.5
ICOL  3.1 % CO
ICOG  2.8 % CO        1972   FTP  6.75  82.0   601.0   3.67   11.8
                      1975   FTP  6.44  78.8   582.1   3.62   12.2
OTHER TESTS:          HOT  START  5.97  73.9   559.2   3.53   12.8
        A/C           HFET


171  67 CHRY NEWP 383 COLD TRANS 10.45 228.7   535.0   1.75    9.6
                      COLD  STAB  7.09 187.5   557.3   1.44   10.1
IHCL  1911PPM CARBON  HOT  TRANS  7.46 208.2   477.6   1.27   10.7
IHCG   265PPM HEXANE  HOT   STAB  6.63 178.4   554.5   1.49   10.4
ICOL  0.5 % CO
ICOG  2.1 % CO        1972   FTP  8.73 207.6   546.5   1.59    9.9
                      1975   FTP  7.90 201.9   530.5   1.46   10.2
OTHER TESTS:          HOT  START  7.03 192.9   517.1   1.38   10.5
        A/C           HFET


172  67 DODG CORO 318 COLD TRANS 26.50 344.2   447.6   0.96    8.3
                      COLD  STAB 15.21 257.6   483.6   1.45    9.5
IHCL  7647PPM CARBON  HOT  TRANS  8.47  94.6   513.8   5.77   12.9
IHCG   560PPM HEXANE  HOT   STAB 13.34 165.8   492.6   2.99   11.2
ICOL  6.2 % CO
ICOG  6.0 % CO        1972   FTP 20.70 299.7   466.0   1.21    8.9
                      1975   FTP 15.70 230.5   484.4   2.55    9.9
OTHER TESTS:          HOT  START 10.97 131.2   502.9   4.34   11.9
        NONE          HFET

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS ON INDIVIDUAL VEHICLES IN HOUSTON

```
                                                                   MPG
VEH                                       -----GRAMS PER MILE-----  FUEL
NO.  YR MAKE MODL CID TEST  TYPE    HC     CO     CO2    NOXC   ECON
-----------------------------------------------------------------------
173  67 FORD CUST 289 COLD TRANS 11.08 147.5   667.3   7.25    9.5
                      COLD  STAB 11.48 213.4   670.1   4.52    8.5
IHCL  7144PPM CARBON  HOT  TRANS  8.38 147.9   582.8   5.77   10.5
IHCG   440PPM HEXANE  HOT   STAB 10.41 213.6   601.5   3.36    9.1
ICOL  6.5 % CO
ICOG  6.3 % CO        1972   FTP 11.28 181.3   668.8   5.85    9.0
                      1975   FTP 10.54 181.4   645.3   5.44    9.2
OTHER TESTS:          HOT  START  9.43 181.6   592.4   4.53    9.8
        NONE .        HFET


174  67 FORD MUST 289 COLD TRANS  8.45  83.9   596.7   6.85   11.7
                      COLD  STAB  7.08 117.0   613.6   6.56   10.8
IHCL  4226PPM CARBON  HOT  TRANS  5.17  59.1   542.1   7.93   13.6
IHCG   300PPM HEXANE  HOT   STAB  7.01 127.5   586.5   5.44   11.0
ICOL  5.5 % CO
ICOG  4.0 % CO        1972   FTP  7.75 100.9   605.4   6.70   11.3
                      1975   FTP  6.84  94.0   590.2   7.00   11.7
OTHER TESTS:          HOT  START  6.11  94.2   564.9   6.65   12.1
        NONE          HFET


175  67 FORD LTD  390 COLD TRANS  6.79  62.9   619.7   7.38   12.0
                      COLD  STAB  4.40  21.2   655.5   6.66   12.6
IHCL  2344PPM CARBON  HOT  TRANS  4.84  28.4   582.5   9.67   13.8
IHCG   360PPM HEXANE  HOT   STAB  4.47  24.0   646.6   6.69   12.7
ICOL  1.0 % CO
ICOG  0.7 % CO        1972   FTP  5.56  41.5   638.1   7.01   12.3
                      1975   FTP  5.02  31.9   627.8   7.65   12.8
OTHER TESTS:          HOT  START  4.65  26.2   615.4   8.14   13.2
        A/C           HFET


176  67 MERC STAW 428 COLD TRANS 11.29 211.4   679.5   3.36    8.5
                      COLD  STAB  9.45 232.9   604.0   1.20    8.9
IHCL  4296PPM CARBON  HOT  TRANS  7.12 194.9   548.3   1.82   10.1
IHCG   550PPM HEXANE  HOT   STAB  8.93 265.0   569.7   0.93    8.7
ICOL  6.5 % CO
ICOG  6.3 % CO        1972   FTP 10.34 222.5   640.8   2.25    8.7
                      1975   FTP  9.19 217.9   604.4   1.83    9.1
OTHER TESTS:          HOT  START  8.05 230.9   559.2   1.36    9.4
        A/C           HFET

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS ON INDIVIDUAL VEHICLES IN HOUSTON

```
                                                                       MPG
                                         -----GRAMS PER MILE-----     FUEL
VEH
NO.  YR MAKE MODL CID TEST   TYPE     HC      CO      CO2    NOXC    ECON
---------------------------------------------------------------------------
177  67 OLDS 98   425 COLD TRANS  11.28    93.4   690.0    7.45    10.2
                      COLD  STAB  11.90   119.9   618.4    3.59    10.5
IHCL  7607PPM CARBON  HOT  TRANS   9.03    86.7   595.7    6.02    11.7
IHCG  1500PPM HEXANE  HOT   STAB  10.62   109.6   608.4    3.42    10.9
ICOL  3.3 % CO
ICOG  2.9 % CO        1972   FTP  11.60   107.0   653.2    5.47    10.3
                      1975   FTP  10.98   105.1   627.1    5.07    10.7
OTHER TESTS:          HOT  START   9.85    98.4   602.2    4.69    11.3
        A/C           HFET


178  67 PLYM BARR 225 COLD TRANS  10.26   122.4   421.1    3.35    13.7
                      COLD  STAB   4.30    50.2   496.6    3.51    15.1
IHCL   616PPM CARBON  HOT  TRANS   3.40    44.8   430.3    3.25    17.4
IHCG    70PPM HEXANE  HOT   STAB   3.38    41.7   509.8    3.02    15.1
ICOL  0.1 % CO
ICOG  0.1 % CO        1972   FTP   7.20    85.3   459.9    3.43    14.4
                      1975   FTP   5.30    63.8   462.4    3.41    15.3
OTHER TESTS:          HOT  START   3.39    43.2   471.1    3.13    16.1
        NONE          HFET


179  67 PONT LEMA 326 COLD TRANS   7.26    94.3   641.2    6.68    10.9
                      COLD  STAB   5.56    77.9   743.4    5.58    10.0
IHCL  6339PPM CARBON  HOT  TRANS   5.07    53.1   598.5    9.29    12.7
IHCG   640PPM HEXANE  HOT   STAB   5.51    72.1   616.6    6.57    11.9
ICOL  6.0 % CO
ICOG  5.9 % CO        1972   FTP   6.39    85.9   693.7    6.11    10.5
                      1975   FTP   5.78    74.4   681.8    6.84    10.9
OTHER TESTS: .        HOT  START   5.30    62.9   607.8    7.90    12.3
        NONE          HFET


180  67 VOLK SEDA  91 COLD TRANS   6.87    85.7   338.6    4.98    17.9
                      COLD  STAB   4.84    59.8   382.1    4.39    16.1
IHCL  3018PPM CARBON  HOT  TRANS   4.99    72.5   340.1    5.03    18.9
IHCG   255PPM HEXANE  HOT   STAB   5.19    62.9   410.2    5.32    16.9
ICOL  3.0 % CO
ICOG  2.6 % CO        1972   FTP   5.82    72.4   360.9    4.68    18.0
                      1975   FTP   5.30    68.8   361.4    4.69    18.3
OTHER TESTS:          HOT  START   5.09    67.6   376.1    5.18    17.8
        NONE          HFET

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C

LISTING OF FEDERAL TEST PROCEDURE RESULTS ON INDIVIDUAL VEHICLES IN DETROIT

```
                                                                MPG
VEH                                    -----GRAMS PER MILE-----  FUEL
NO.  YR MAKE MODL CID TEST  TYPE   HC     CO     CO2   NOXC  ECON
-----------------------------------------------------------------
001  74 BUIC ELEC 455 COLD TRANS  2.78   47.0   785.0  2.71  10.2
                      COLD  STAB  1.51   12.5   830.7  1.82  10.4
IHCL  1782PPM CARBON  HOT  TRANS  2.22   19.6   678.1  3.47  12.4
IHCG   190PPM HEXANE  HOT   STAB  1.47   10.1   780.4  2.12  11.1
ICOL  1.6 % CO
ICOG  1.6 % CO        1972   FTP  2.13   29.3   808.5  2.25  10.3
                      1975   FTP  1.97   21.7   778.8  2.46  10.8
OTHER TESTS:          HOT  START  1.84   14.7   730.6  2.78  11.7
   MODAL,A/C          HFET        0.60   10.7   510.8  3.45  16.8


002  74 CHEV MONT 400 COLD TRANS  1.60   27.1   749.2  3.58  11.1
                      COLD  STAB  1.20   21.7   892.4  2.02   9.5
IHCL   796PPM CARBON  HOT  TRANS  1.20   21.9   734.2  3.19  11.5
IHCG    80PPM HEXANE  HOT   STAB  1.12   23.4   871.6  2.03   9.7
ICOL  0.8 % CO
ICOG  0.6 % CO        1972   FTP  1.39   24.3   822.7  2.78  10.3
                      1975   FTP  1.28   22.9   818.6  2.67  10.3
OTHER TESTS:          HOT  START  1.16   22.7   804.7  2.60  10.5
         MODAL        HFET        0.46   15.0   631.5  4.08  13.5


003  74 CHEV IMPA 350 COLD TRANS  2.38   42.1   879.8  6.54   9.3
                      COLD  STAB  1.38   14.4   904.4  5.46   9.5
IHCL   945PPM CARBON  HOT  TRANS  2.08   38.4   787.1  6.56  10.4
IHCG   150PPM HEXANE  HOT   STAB  2.10   14.9   862.0  6.06   9.9
ICOL  1.1 % CO
ICOG  1.3 % CO        1972   FTP  1.87   27.9   892.4  5.99   9.4
                      1975   FTP  1.79   26.8   866.7  5.99   9.7
OTHER TESTS:          HOT  START  2.09   26.4   825.5  6.30  10.2
   MODAL,A/C          HFET        0.74   17.5   667.0  5.60  12.7


004  74 DODG DART 318 COLD TRANS  6.90   88.6   631.9  2.61  11.2
                      COLD  STAB  4.04   78.0   696.3  1.89  10.7
IHCL  3633PPM CARBON  HOT  TRANS  4.13   42.4   569.8  3.29  13.7
IHCG   254PPM HEXANE  HOT   STAB  4.06   82.9   675.7  1.81  10.8
ICOL  5.2 % CO
ICOG  4.2 % CO        1972   FTP  5.43   83.1   665.0  2.24  10.9
                      1975   FTP  4.66   70.3   647.8  2.43  11.5
OTHER TESTS:          HOT  START  4.09   63.2   624.1  2.53  12.1
         MODAL        HFET        2.41   15.6   471.8  3.50  17.6

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN DETROIT

```
                                                                    MPG
VEH                                   -----GRAMS PER MILE-----     FUEL
NO.   YR MAKE MODL CID TEST   TYPE     HC      CO     CO2    NOXC   ECON
------------------------------------------------------------------------
005   74 FORD TORI 302 COLD TRANS    9.02    79.5   707.0   7.31   10.3
                       COLD  STAB    4.28    72.3   680.5   4.99   11.0
IHCL   3882PPM CARBON  HOT  TRANS    4.34    51.6   683.0   5.52   11.4
IHCG    270PPM HEXANE  HOT   STAB    4.54    71.3   717.5   4.07   10.5
ICOL  4.9 % CO
ICOG  3.6 % CO         1972   FTP    6.59    75.8   693.4   6.12   10.6
                       1975   FTP    5.29    68.1   686.7   5.62   11.0
OTHER TESTS:           HOT  START    4.44    61.7   700.7   4.78   10.9
        MODAL          HFET          1.86    10.5   561.3   5.35   15.2


006   74 FORD LTD  351 COLD TRANS    5.24    73.7   893.8   4.13    8.6
                       COLD  STAB    2.86    19.7   918.4   3.54    9.3
IHCL   1144PPM CARBON  HOT  TRANS    4.27    27.2   794.7   4.08   10.4
IHCG    105PPM HEXANE  HOT   STAB    3.03    22.0   907.3   3.31    9.3
ICOL  0.1 % CO
ICOG  0.2 % CO         1972   FTP    4.02    46.0   906.4   3.83    9.0
                       1975   FTP    3.75    33.1   879.0   3.81    9.4
OTHER TESTS:           HOT  START    3.64    24.5   852.5   3.68    9.8
        MODAL          HFET          2.27    20.7   603.8   3.26   13.8


007   74 OLDS CUTL 350 COLD TRANS    3.29    29.6   803.3   3.83   10.3
                       COLD  STAB    2.29     9.5   839.0   3.72   10.3
IHCL    896PPM CARBON  HOT  TRANS    2.28    13.6   710.0   4.30   12.0
IHCG    100PPM HEXANE  HOT   STAB    2.36    11.8   824.8   3.55   10.4
ICOL  0.1 % CO
ICOG  0.2 % CO         1972   FTP    2.78    19.3   821.6   3.77   10.3
                       1975   FTP    2.50    14.9   795.8   3.90   10.7
OTHER TESTS:           HOT  START    2.32    12.7   768.9   3.92   11.1
   MODAL,A/C           HFET          1.62     5.5   562.6   4.13   15.4


008   74 PLYM SATE 318 COLD TRANS    7.50    72.7   660.3   2.76   11.1
                       COLD  STAB    5.26   112.6   663.9   1.83   10.3
IHCL    706PPM CARBON  HOT  TRANS    4.16    56.6   600.8   3.40   12.6
IHCG    440PPM HEXANE  HOT   STAB    4.62    98.2   643.3   1.85   10.9
ICOL  5.2 % CO
ICOG  8.0 % CO         1972   FTP    6.35    93.3   662.1   2.28   10.7
                       1975   FTP    5.42    88.8   645.6   2.46   11.1
OTHER TESTS:           HOT  START    4.39    77.9   622.6   2.60   11.7
   MODAL,A/C           HFET          2.43    15.7   495.6   3.63   16.8

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS ON INDIVIDUAL VEHICLES IN DETROIT

```
                                                                       MPG
VEH                                   -----GRAMS PER MILE-----        FUEL
NO.  YR MAKE MODL CID TEST  TYPE    HC     CO     CO2     NOXC        ECON
--------------------------------------------------------------------------
009  74 PONT BONN 400 COLD TRANS   5.39   42.7   884.7   3.78          9.2
                      COLD  STAB   2.40   13.1   879.9   2.82          9.8
IHCL  1393PPM CARBON  HOT  TRANS   3.30   20.5   819.4   5.28         10.3
IHCG   170PPM HEXANE  HOT   STAB   3.07   20.6   896.0   3.30          9.5
ICOL  0.4 % CO
ICOG  0.4 % CO        1972   FTP   3.86   27.5   882.3   3.29          9.5
                      1975   FTP   3.28   21.3   864.1   3.70          9.8
OTHER TESTS:          HOT  START   3.18   20.6   858.7   4.26          9.8
   MODAL,A/C          HFET         3.05   26.4   614.5   4.85         13.3


010  74 VOLK SEDA  97 COLD TRANS   7.16   45.6   305.5   2.78         22.2
                      COLD  STAB   6.90   55.0   375.7   2.00         18.3
IHCL  4977PPM CARBON  HOT  TRANS   5.57   45.3   318.7   2.70         21.8
IHCG   390PPM HEXANE  HOT   STAB   4.64   54.0   380.3   1.96         18.5
ICOL  3.3 % CO
ICOG  2.6 % CO        1972   FTP   7.03   50.4   341.5   2.38         20.0
                      1975   FTP   6.59   50.3   345.2   2.36         19.9
OTHER TESTS:          HOT  START   5.10   49.8   350.4   2.32         20.0
         MODAL        HFET         1.46   15.5   284.0   3.01         28.4


011  73 AMMO HORN 258 COLD TRANS   2.73   43.0   542.0   5.43         14.4
                      COLD  STAB   1.58   33.9   676.2   3.44         12.1
IHCL  1294PPM CARBON  HOT  TRANS   1.81   30.1   556.7   5.77         14.6
IHCG   140PPM HEXANE  HOT   STAB   0.81   14.4   720.8   4.38         11.9
ICOL  1.3 % CO
ICOG  1.2 % CO        1972   FTP   2.14   38.3   610.9   4.41         13.1
                      1975   FTP   1.89   34.8   615.0   4.50         13.1
OTHER TESTS:          HOT  START   1.30   22.0   641.0   5.06         13.1
         MODAL        HFET         0.64    5.6   430.2   6.57         20.1


012  73 BUIC LESA 350 COLD TRANS   3.78   50.0   751.4   6.26         10.5
                      COLD  STAB   2.26   34.3   722.6   3.61         11.3
IHCL  4679PPM CARBON  HOT  TRANS   2.30   22.5   684.6   6.56         12.2
IHCG   290PPM HEXANE  HOT   STAB   2.26   32.8   710.7   3.93         11.5
ICOL  4.3 % CO
ICOG  4.6 % CO        1972   FTP   3.00   41.9   736.6   4.90         10.9
                      1975   FTP   2.59   34.3   718.1   4.98         11.4
OTHER TESTS:          HOT  START   2.28   27.8   698.0   5.21         11.9
         MODAL        HFET         1.15    6.5   559.8   6.53         15.5

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN DETROIT

```
                                                                    MPG
VEH                                    -----GRAMS PER MILE-----     FUEL
NO.  YR MAKE MODL CID TEST   TYPE     HC      CO      CO2    NOXC    ECON
--------------------------------------------------------------------------
013  73 BUIC LIMI 455 COLD TRANS    4.43    56.1   903.0    4.65     8.8
                      COLD  STAB    3.74    64.2   883.1    2.70     8.9
IHCL  2062PPM CARBON  HOT  TRANS    4.20    44.7   758.9    4.51    10.5
IHCG   155PPM HEXANE  HOT   STAB    3.75    66.5   855.4    2.65     9.1
ICOL  3.7 % CO
ICOG  3.6 % CO        1972   FTP    4.07    60.2   892.8    3.65     8.9
                      1975   FTP    4.01    57.1   852.8    3.61     9.3
OTHER TESTS:          HOT  START    3.97    55.9   808.4    3.55     9.8
          MODAL       HFET          2.03    22.0   576.3    4.59    14.4


014  73 CADI DEVI 472 COLD TRANS    4.93    53.8   846.8    3.93     9.4
                      COLD  STAB    2.38    35.2   981.8    4.87     8.5
IHCL   945PPM CARBON  HOT  TRANS    2.44    28.3   862.6    5.45     9.7
IHCG   100PPM HEXANE  HOT   STAB    2.29    35.1   958.7    4.73     8.7
ICOL  2.3 % CO
ICOG  2.0 % CO        1972   FTP    3.62    44.3   916.1    4.41     8.9
                      1975   FTP    2.93    37.2   920.5    4.83     9.0
OTHER TESTS:          HOT  START    2.36    31.8   911.9    5.08     9.2
          MODAL       HFET          1.20     6.5   673.5    5.92    12.9


015  73 CAPR SEDA 122 COLD TRANS    4.15    43.8   340.8    6.08    21.0
                      COLD  STAB    3.11    23.0   373.6    5.65    21.2
IHCL  2937PPM CARBON  HOT  TRANS    2.65    18.4   312.7    6.66    25.4
IHCG   230PPM HEXANE  HOT   STAB    2.98    21.4   361.0    6.11    22.0
ICOL  2.3 % CO
ICOG  1.8 % CO        1972   FTP    3.62    33.1   357.6    5.86    21.1
                      1975   FTP    3.20    26.1   349.8    6.02    22.1
OTHER TESTS:          HOT  START    2.82    19.9   337.5    6.38    23.5
          MODAL       HFET          0.86     3.8   256.0    1.63    33.5


016  73 CHEV STAW 140 COLD TRANS    4.98    58.7   402.0    6.73    17.4
                      COLD  STAB    3.22    48.6   465.6    4.37    16.1
IHCL  2538PPM CARBON  HOT  TRANS    3.32    43.9   416.1    4.85    17.9
IHCG   210PPM HEXANE  HOT   STAB    3.48    52.1   457.1    4.42    16.1
ICOL  3.7 % CO
ICOG  2.5 % CO        1972   FTP    4.08    53.5   434.7    5.52    16.7
                      1975   FTP    3.62    49.4   438.6    5.00    16.8
OTHER TESTS:          HOT  START    3.40    48.1   437.1    4.63    17.0
          MODAL       HFET          1.58    16.3   321.4    5.53    25.2

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS ON INDIVIDUAL VEHICLES IN DETROIT

VEH NO.	YR MAKE MODL CID	TEST	TYPE	-----GRAMS PER MILE-----				MPG FUEL ECON
				HC	CO	CO2	NOXC	
017	73 CHEV CAMA 250	COLD	TRANS	5.67	30.2	578.2	5.60	13.8
		COLD	STAB	2.62	6.9	591.7	4.66	14.5
IHCL	1393PPM CARBON	HOT	TRANS	3.12	11.1	495.1	5.38	17.0
IHCG	165PPM HEXANE	HOT	STAB	2.65	11.7	567.3	4.09	14.9
ICOL	0.1 % CO							
ICOG	0.1 % CO	1972	FTP	4.10	18.3	585.1	5.12	14.2
		1975	FTP	3.40	13.0	562.1	5.06	15.0
OTHER TESTS:		HOT	START	2.88	11.4	532.2	4.72	15.9
	MODAL	HFET		1.66	9.7	373.0	5.50	22.6
018	73 CHEV CHEV 307	COLD	TRANS	4.92	56.1	790.4	2.87	9.9
		COLD	STAB	9.48	47.4	745.1	2.31	10.4
IHCL	843PPM CARBON	HOT	TRANS	3.85	36.9	682.8	2.70	11.8
IHCG	100PPM HEXANE	HOT	STAB	6.62	56.1	756.7	2.08	10.3
ICOL	1.9 % CO							
ICOG	2.2 % CO	1972	FTP	7.26	51.6	767.2	2.58	10.2
		1975	FTP	6.97	46.3	737.3	2.53	10.7
OTHER TESTS:		HOT	START	5.27	46.7	720.7	2.38	10.9
	MODAL	HFET		0.84	21.9	606.4	1.84	13.8
019	73 CHEV MONT 350	COLD	TRANS	3.03	63.2	682.2	2.64	11.2
		COLD	STAB	1.73	34.3	717.4	1.54	11.4
IHCL	933PPM CARBON	HOT	TRANS	1.91	22.2	615.4	2.73	13.5
IHCG	135PPM HEXANE	HOT	STAB	1.80	27.3	684.6	1.48	12.1
ICOL	0.8 % CO							
ICOG	1.3 % CO	1972	FTP	2.36	48.4	700.3	2.08	11.3
		1975	FTP	2.05	37.0	681.8	2.10	11.9
OTHER TESTS:		HOT	START	1.85	24.8	651.0	2.09	12.8
	MODAL	HFET		0.82	5.4	511.3	2.77	17.0
020	73 CHEV CHEV 350	COLD	TRANS	2.97	27.2	780.9	4.80	10.7
		COLD	STAB	2.04	18.0	781.1	2.52	10.9
IHCL	1129PPM CARBON	HOT	TRANS	2.55	18.1	654.6	4.24	12.8
IHCG	120PPM HEXANE	HOT	STAB	2.10	20.5	744.6	2.31	11.3
ICOL	1.3 % CO							
ICOG	1.5 % CO	1972	FTP	2.49	22.5	781.0	3.63	10.8
		1975	FTP	2.37	20.0	746.0	3.47	11.3
OTHER TESTS:		HOT	START	2.32	19.3	700.8	3.25	12.0
	MODAL,LOADED	HFET		0.93	10.1	506.2	4.28	16.9

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN DETROIT

```
                                                                        MPG
VEH                                  -----GRAMS PER MILE-----          FUEL
NO.  YR MAKE MODL CID TEST   TYPE    HC      CO      CO2     NOXC      ECON
----------------------------------------------------------------------------
021   73 CHEV LAGU 350 COLD  TRANS   3.86    43.0    666.9   3.19      11.9
                       COLD   STAB   1.83    27.7    787.6   2.09      10.6
IHCL    746PPM CARBON  HOT   TRANS   1.83    22.1    613.5   3.31      13.6
IHCG    240PPM HEXANE  HOT    STAB   1.77    26.2    770.0   2.15      10.9
ICOL  0.9 % CO
ICOG  0.9 % CO         1972    FTP   2.82    35.1    728.9   2.62      11.2
                       1975    FTP   2.25    29.3    714.0   2.66      11.6
OTHER TESTS:           HOT   START   1.80    24.2    693.8   2.72      12.0
         MODAL         HFET          0.75     7.9    502.9   3.43      17.1


022   73 CHEV MONT 350 COLD  TRANS   3.70    68.1    685.9   2.56      11.0
                       COLD   STAB   3.43    84.9    682.4   1.60      10.7
IHCL   1264PPM CARBON  HOT   TRANS   3.07    56.9    596.8   2.35      12.8
IHCG    150PPM HEXANE  HOT    STAB   3.67    91.6    666.4   1.33      10.8
ICOL  2.7 % CO
ICOG  8.0 % CO         1972    FTP   3.56    76.7    684.1   2.07      10.9
                       1975    FTP   3.39    73.6    659.4   2.01      11.3
OTHER TESTS:           HOT   START   3.38    74.7    632.5   1.83      11.7
   MODAL,LOADED        HFET          1.18    25.3    496.0   2.53      16.5


023   73 CHEV CAPR 400 COLD  TRANS   4.37    70.5    768.8   3.67       9.9
                       COLD   STAB   2.23    57.7    745.7   2.42      10.5
IHCL   1204PPM CARBON  HOT   TRANS   3.17    45.9    664.4   3.83      11.9
IHCG    235PPM HEXANE  HOT    STAB   2.16    54.4    737.4   2.52      10.7
ICOL  1.7 % CO
ICOG  2.2 % CO         1972    FTP   3.27    64.0    756.9   3.03      10.2
                       1975    FTP   2.94    57.1    728.0   3.07      10.7
OTHER TESTS:           HOT   START   2.65    50.3    701.8   3.15      11.2
   MODAL,A/C           HFET          1.26    18.1    548.7   4.08      15.3


024   73 CHRY NEWY 400 COLD  TRANS  29.66   132.7    756.8   4.69       8.4
                       COLD   STAB   3.47    72.4    871.8   2.83       8.9
IHCL   3733PPM CARBON  HOT   TRANS   2.47    36.6    740.7   4.86      11.0
IHCG    230PPM HEXANE  HOT    STAB   3.30    71.8    872.9   3.03       8.9
ICOL  5.2 % CO
ICOG  4.4 % CO         1972    FTP  16.22   101.8    815.8   3.74       8.6
                       1975    FTP   8.67    75.1    811.4   3.76       9.3
OTHER TESTS:           HOT   START   2.90    54.7    808.5   3.92       9.8
         MODAL         HFET          2.37    37.4    527.6   5.17      14.9

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN DETROIT

```
VEH                                                                  MPG
                                     -----GRAMS PER MILE-----       FUEL
NO.  YR MAKE MODL CID TEST  TYPE   HC     CO     CO2     NOXC       ECON
------------------------------------------------------------------------
025  73 DATS SEDA 146 COLD TRANS  2.85   60.4   380.1   4.61       18.3
                      COLD  STAB  4.86   92.0   369.3   1.56       16.8
IHCL  9946PPM CARBON  HOT  TRANS  2.56   41.5   340.7   4.84       21.4
IHCG   920PPM HEXANE  HOT   STAB  4.44   91.2   354.9   1.50       17.3
ICOL  5.2 % CO
ICOG  4.9 % CO        1972   FTP  3.88   76.6   374.5   3.04       17.5
                      1975   FTP  3.80   71.4   363.6   3.11       18.2
OTHER TESTS:          HOT  START  3.52   67.1   348.0   3.13       19.1
          MODAL       HFET        3.63   54.9   265.5   3.84       24.4


026  73 DODG DART 225 COLD TRANS  3.19   48.5   499.2   7.98       15.2
                      COLD  STAB  2.19   14.3   507.1   4.25       16.5
IHCL  1234PPM CARBON  HOT  TRANS  2.38   40.5   428.4   4.31       17.8
IHCG   110PPM HEXANE  HOT   STAB  2.34   21.7   491.8   3.90       16.6
ICOL  0.5 % CO
ICOG  0.8 % CO        1972   FTP  2.68   31.0   503.3   6.07       15.8
                      1975   FTP  2.45   28.7   483.6   5.05       16.5
OTHER TESTS:          HOT  START  2.36   30.9   460.9   4.10       17.2
          MODAL       HFET        1.38   11.3   361.5   4.71       23.1


027  73 DODG DART 318 COLD TRANS  4.51   68.0   626.4   6.20       11.9
                      COLD  STAB  3.35   67.3   646.9   3.61       11.6
IHCL  3783PPM CARBON  HOT  TRANS  3.16   48.7   558.2   6.26       13.8
IHCG   265PPM HEXANE  HOT   STAB  3.60   73.8   617.1   3.35       11.9
ICOL  4.6 % CO
ICOG  4.6 % CO        1972   FTP  3.91   67.6   636.9   4.87       11.7
                      1975   FTP  3.54   62.3   618.0   4.88       12.2
OTHER TESTS:          HOT  START  3.39   61.6   588.4   4.76       12.8
          MODAL       HFET        2.17   23.8   430.2   6.71       18.7


028  73 FORD PINT 122 COLD TRANS  5.59   43.0   304.6   3.71       22.8
                      COLD  STAB  3.61   46.4   364.9   2.92       19.8
IHCL  3036PPM CARBON  HOT  TRANS  3.12   31.4   329.3   4.85       22.8
IHCG   270PPM HEXANE  HOT   STAB  3.95   59.1   343.4   2.57       19.8
ICOL  4.0 % CO
ICOG  3.8 % CO        1972   FTP  4.58   44.8   335.5   3.30       21.1
                      1975   FTP  3.89   41.5   342.4   3.62       21.1
OTHER TESTS:          HOT  START  3.54   45.6   336.5   3.57       21.2
          MODAL       HFET        1.26    7.9   255.7   5.81       32.6

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN DETROIT

```
                                                                   MPG
VEH                                    -----GRAMS PER MILE-----   FUEL
NO.  YR MAKE MODL CID TEST   TYPE    HC     CO     CO2    NOXC   ECON
-----------------------------------------------------------------------
029  73 FORD MAVE 200 COLD TRANS   4.94   55.6   453.7   3.23   15.9
                      COLD  STAB   3.42   57.9   488.7   2.40   15.0
IHCL  2648PPM CARBON  HOT  TRANS   2.93   36.8   406.5   3.21   18.7
IHCG   165PPM HEXANE  HOT   STAB   3.14   49.1   480.0   2.49   15.7
ICOL  4.1 % CO
ICOG  3.7 % CO        1972   FTP   4.16   56.7   471.7   2.80   15.5
                      1975   FTP   3.60   51.5   458.6   2.79   16.1
OTHER TESTS:          HOT  START   3.04   43.1   444.2   2.84   17.0
        MODAL         HFET         1.58    6.1   334.0   4.29   25.5


030  73 FORD MUST 302 COLD TRANS   5.55   64.6   781.6   4.28    9.9
                      COLD  STAB   4.47   53.8   777.7   3.14   10.1
IHCL  3484PPM CARBON  HOT  TRANS   4.90   37.7   688.7   4.45   11.6
IHCG   310PPM HEXANE  HOT   STAB   4.54   50.9   754.3   3.19   10.5
ICOL  2.8 % CO
ICOG  2.7 % CO        1972   FTP   5.00   59.0   779.7   3.70   10.0
                      1975   FTP   4.81   51.6   753.9   3.74   10.4
OTHER TESTS:          HOT  START   4.72   44.5   722.4   3.81   11.0
        MODAL         HFET         2.68   20.3   567.7   4.19   14.6


031  73 FORD LTD  351 COLD TRANS   4.42   48.2   755.5   5.32   10.5
                      COLD  STAB   2.68   13.1   788.8   4.16   10.9
IHCL  1204PPM CARBON  HOT  TRANS   3.38   16.1   671.2   4.89   12.5
IHCG   145PPM HEXANE  HOT   STAB   2.68   11.6   759.2   4.28   11.3
ICOL  0.1 % CO
ICOG  0.1 % CO        1972   FTP   3.53   30.2   772.6   4.73   10.7
                      1975   FTP   3.24   21.3   749.2   4.61   11.2
OTHER TESTS:          HOT  START   3.02   13.8   716.4   4.58   11.9
        MODAL         HFET         2.06    9.7   504.1   4.51   16.9


032  73 FORD MUST 351 COLD TRANS   7.40   66.8   596.1   2.38   12.3
                      COLD  STAB   4.65  100.2   620.0   1.72   11.2
IHCL  9946PPM CARBON  HOT  TRANS   3.54   52.4   564.3   2.59   13.5
IHCG  1300PPM HEXANE  HOT   STAB   4.12   84.4   628.8   2.02   11.5
ICOL  5.2 % CO
ICOG  6.0 % CO        1972   FTP   5.98   83.9   608.4   2.04   11.7
                      1975   FTP   4.91   79.9   599.6   2.10   12.0
OTHER TESTS:          HOT  START   3.84   68.8   597.4   2.30   12.4
   MODAL,A/C          HFET         2.32   17.7   500.3   2.66   16.6

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS ON INDIVIDUAL VEHICLES IN DETROIT

```
                                                                   MPG
VEH                                    -----GRAMS PER MILE-----   FUEL
NO.  YR MAKE MODL CID TEST  TYPE    HC     CO     CO2    NOXC   ECON
----------------------------------------------------------------------
033  73 FORD STAW 400 COLD TRANS   5.46   65.4   697.4   4.58    8.7
                      COLD  STAB   3.20   47.2   912.3   2.62    8.9
IHCL  5177PPM CARBON  HOT  TRANS   3.66   38.2   793.2   4.25   10.3
IHCG   780PPM HEXANE  HOT   STAB   3.44   39.2   873.9   2.71    9.4
ICOL  0.4 % CO
ICOG  0.6 % CO        1972   FTP   4.30   56.0   905.1   3.57    8.8
                      1975   FTP   3.80   48.5   876.2   3.48    9.2
OTHER TESTS:          HOT  START   3.54   38.7   834.7   3.46    9.8
   MODAL,LOADED       HFET         1.76   15.2   628.3   6.29   13.5


034  73 FORD LTD  400 COLD TRANS   4.53   54.1   803.4   4.33    9.8
                      COLD  STAB   4.07   83.6   768.9   2.98    9.7
IHCL  6371PPM CARBON  HOT  TRANS   4.49   46.7   695.4   4.14   11.3
IHCG   415PPM HEXANE  HOT   STAB   4.41   88.2   752.5   3.39    9.8
ICOL  5.2 % CO
ICOG  7.8 % CO        1972   FTP   4.29   69.2   785.7   3.64    9.8
                      1975   FTP   4.28   67.2   755.7   3.58   10.1
OTHER TESTS:          HOT  START   4.45   68.0   724.7   3.76   10.5
   MODAL,LOADED       HFET         1.98   10.5   569.9   4.32   15.0


035  73 MAZD SEDA  70 COLD TRANS   4.90   27.9   518.8   1.62   15.4
                      COLD  STAB   2.17   23.4   754.5   1.36   11.1
IHCL  9946PPM CARBON  HOT  TRANS   4.01   34.9   522.2   2.33   15.1
IHCG  2000PPM HEXANE  HOT   STAB   1.88   22.5   736.1   1.56   11.4
ICOL  5.2 % CO
ICOG  4.8 % CO        1972   FTP   3.50   25.6   639.8   1.49   12.8
                      1975   FTP   3.25   27.5   640.7   1.68   12.8
OTHER TESTS:          HOT  START   2.91   28.5   632.0   1.94   12.9
         MODAL        HFET         0.65    4.3   417.6   1.89   20.8


036  73 MERC MARQ 429 COLD TRANS   4.58   78.3   896.6   6.62    8.6
                      COLD  STAB   3.91  115.9   857.4   2.90    8.4
IHCL  2986PPM CARBON  HOT  TRANS   4.29   74.3   716.7   5.09   10.5
IHCG   280PPM HEXANE  HOT   STAB   3.41   95.8   871.5   3.36    8.6
ICOL  4.2 % CO
ICOG  4.6 % CO        1972   FTP   4.23   97.6   876.5   4.71    8.5
                      1975   FTP   4.15   96.5   826.6   4.29    9.0
OTHER TESTS:          HOT  START   3.84   85.4   796.1   4.20    9.4
   MODAL,A/C          HFET         2.60   23.1   588.7   6.56   14.0

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS ON INDIVIDUAL VEHICLES IN DETROIT

```
                                                                   MPG
VEH                                   -----GRAMS PER MILE-----    FUEL
NO.  YR MAKE MODL CID TEST   TYPE     HC     CO     CO2    NOXC   ECON
----------------------------------------------------------------------
037   73 OLDS CUTL 350 COLD TRANS   3.62   29.9   804.1   4.48   10.3
                       COLD  STAB   3.22   26.5   792.9   3.58   10.5
IHCL   1622PPM CARBON  HOT  TRANS   2.90   20.3   668.5   4.39   12.5
IHCG    155PPM HEXANE  HOT   STAB   3.34   26.2   775.1   3.47   10.7
ICOL   0.6 % CO
ICOG   0.6 % CO        1972   FTP   3.41   28.2   798.4   4.02   10.4
                       1975   FTP   3.22   25.5   760.7   3.99   10.9
OTHER TESTS:           HOT  START   3.13   23.4   723.2   3.92   11.5
          MODAL        HFET         2.25    9.5   505.2   5.07   16.8


038  73 OLDS 98    455 COLD TRANS   3.68   33.1   815.4  10.03   10.1
                       COLD  STAB   4.15   34.2   787.0   8.80   10.4
IHCL   9946PPM CARBON  HOT  TRANS   3.73   14.1   716.4  10.87   11.8
IHCG   1400PPM HEXANE  HOT   STAB   4.40   20.5   778.0   8.59   10.8
ICOL   2.5 % CO
ICOG   2.9 % CO        1972   FTP   3.92   33.7   800.8   9.40   10.2
                       1975   FTP   3.93   28.4   773.3   9.63   10.7
OTHER TESTS:           HOT  START   4.07   17.4   748.0   9.70   11.3
   MODAL,LOADED        HFET         1.56    4.1   597.9  11.40   14.6


039  73 PLYM FURY 318  COLD TRANS   5.03   71.0   650.4   8.05   11.4
                       COLD  STAB   3.73   58.9   663.7   6.42   11.6
IHCL   2289PPM CARBON  HOT  TRANS   2.99   39.6   593.2   7.99   13.3
IHCG    180PPM HEXANE  HOT   STAB   3.58   58.1   665.1   6.13   11.6
ICOL   3.1 % CO
ICOG   2.5 % CO        1972   FTP   4.36   64.8   657.2   7.22   11.5
                       1975   FTP   3.80   56.1   641.4   7.20   12.0
OTHER TESTS:           HOT  START   3.30   49.1   630.1   7.04   12.4
          MODAL        HFET         2.20   22.2   466.9   8.88   17.4


040  73 PLYM FURY 360  COLD TRANS   7.48   88.2   748.8   4.60    9.7
                       COLD  STAB   7.00  119.7   650.2   4.03   10.3
IHCL   8721PPM CARBON  HOT  TRANS   5.22   82.4   609.4   4.97   11.7
IHCG    745PPM HEXANE  HOT   STAB   7.58  130.0   654.4   4.01   10.1
ICOL   5.2 % CO
ICOG   7.9 % CO        1972   FTP   7.24  104.4   698.2   4.31   10.0
                       1975   FTP   6.61  102.8   659.5   4.41   10.5
OTHER TESTS:           HOT  START   6.43  106.9   632.5   4.48   10.8
   MODAL,LOADED        HFET         3.66   52.8   491.9   4.82   15.1

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN DETROIT

```
                                                                   MPG
VEH                                      -----GRAMS PER MILE-----  FUEL
NO.  YR MAKE MODL CID TEST  TYPE    HC     CO     CO2    NOXC     ECON
-----------------------------------------------------------------------
041   73 PONT VENT 350 COLD TRANS   9.14   84.5   750.4   3.86     9.7
                       COLD  STAB   5.70   71.5   738.7   3.37    10.2
IHCL   9946PPM CARBON  HOT  TRANS   5.09   48.5   654.5   5.11    11.9
IHCG    560PPM HEXANE  HOT   STAB   6.22   78.2   733.8   3.66    10.1
ICOL  5.2 % CO
ICOG  5.8 % CO         1972   FTP   7.37   77.8   744.4   3.61    10.0
                       1975   FTP   6.25   67.8   717.8   3.96    10.5
OTHER TESTS:           HOT  START   5.67   63.8   695.2   4.37    10.9
         MODAL         HFET         3.08   16.0   566.3   6.13    14.8


042   73 PONT GRNA 400 COLD TRANS   4.83   53.5   757.6   3.77    10.4
                       COLD  STAB   4.72   55.0   733.1   3.36    10.6
IHCL   3285PPM CARBON  HOT  TRANS   4.57   35.4   652.9   7.18    12.3
IHCG    290PPM HEXANE  HOT   STAB   5.23   62.0   710.5   3.29    10.8
ICOL  3.7 % CO
ICOG  4.0 % CO         1972   FTP   4.77   54.2   745.0   3.56    10.5
                       1975   FTP   4.70   49.2   716.0   4.50    11.0
OTHER TESTS:           HOT  START   4.91   49.1   682.4   5.18    11.5
   MODAL,A/C           HFET         2.51   11.4   559.9   8.90    15.1


043   73 TOYO CELI 120 COLD TRANS   3.41   61.6   383.8   5.00    18.1
                       COLD  STAB   3.39   69.0   419.0   3.59    16.5
IHCL   6670PPM CARBON  HOT  TRANS   3.11   33.5   360.0   5.78    21.0
IHCG    460PPM HEXANE  HOT   STAB   3.28   68.6   408.3   3.51    16.9
ICOL  2.5 % CO
ICOG  1.5 % CO         1972   FTP   3.40   65.4   401.9   4.27    17.2
                       1975   FTP   3.32   57.6   395.3   4.49    17.9
OTHER TESTS:           HOT  START   3.20   51.5   384.8   4.62    18.6
         MODAL         HFET         1.08   18.7   280.9   6.29    28.3


044   73 VOLK SEDA  97 COLD TRANS   5.97   63.9   351.4   4.15    18.9
                       COLD  STAB   4.13   65.9   375.8   2.70    18.0
IHCL   2488PPM CARBON  HOT  TRANS   3.73   47.0   323.1   3.72    21.7
IHCG    220PPM HEXANE  HOT   STAB   4.34   63.7   379.5   2.67    18.0
ICOL  2.9 % CO
ICOG  3.4 % CO         1972   FTP   5.03   64.9   364.0   3.41    18.4
                       1975   FTP   4.41   60.2   356.1   3.29    19.1
OTHER TESTS:           HOT  START   4.05   55.6   352.1   3.18    19.6
         MODAL         HFET         1.40   16.0   292.0   4.57    27.6

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN DETROIT

```
                                                                 MPG
VEH                                -----GRAMS PER MILE-----     FUEL
NO.  YR MAKE MODL CID TEST  TYPE     HC     CO     CO2   NOXC   ECON
--------------------------------------------------------------------
045  73 VOLK SEDA 103 COLD TRANS   3.64   43.6   421.1   4.23   17.7
                      COLD  STAB   1.97   25.3   455.9   3.39   17.7
IHCL   424PPM CARBON  HOT  TRANS   2.18   40.7   382.1   3.51   19.6
IHCG    55PPM HEXANE  HOT   STAB   1.85   25.9   445.5   3.26   18.0
ICOL  0.1 % CO
ICOG  0.1 % CO        1972   FTP   2.78   34.2   439.0   3.80   17.7
                      1975   FTP   2.38   33.4   428.2   3.60   18.2
OTHER TESTS:          HOT  START   2.01   33.1   414.7   3.38   18.8
       MODAL          HFET         1.20   14.9   312.9   3.98   26.1


046  72 BUIC LESA 350 COLD TRANS   9.77  115.9   725.7   6.82    9.5
                      COLD  STAB  10.12  173.7   647.7   4.75    9.3
IHCL  9946PPM CARBON  HOT  TRANS   8.19   96.9   609.1   7.27   11.3
IHCG  1250PPM HEXANE  HOT   STAB  11.27  190.4   646.6   4.09    9.0
ICOL  5.2 % CO
ICOG 10.0 % CO        1972   FTP   9.95  145.6   685.6   5.76    9.4
                      1975   FTP   9.51  140.3   653.3   5.88    9.8
OTHER TESTS:          HOT  START   9.77  144.9   628.3   5.64   10.0
   MODAL,A/C          HFET         4.07   44.7   485.3   7.33   15.6


047  72 BUIC CENT 455 COLD TRANS   6.16   70.4   830.8  11.19    9.2
                      COLD  STAB   5.26   70.7   875.9  11.12    8.8
IHCL  3185PPM CARBON  HOT  TRANS   5.11   38.9   747.5  13.61   10.8
IHCG   180PPM HEXANE  HOT   STAB   4.67   68.1   886.0  11.62    8.8
ICOL  4.4 % CO
ICOG  3.0 % CO        1972   FTP   5.70   70.5   853.9  11.15    9.0
                      1975   FTP   5.41   61.8   830.8  11.83    9.4
OTHER TESTS:          HOT  START   4.88   53.9   818.6  12.59    9.7
       MODAL          HFET         1.68   10.7   600.8  12.68   14.3


048  72 CHEV VEGA 140 COLD TRANS   6.19  107.6   460.6   1.15   13.7
                      COLD  STAB   2.77   58.9   584.3   0.79   12.9
IHCL   421PPM CARBON  HOT  TRANS   5.05   78.0   442.1   0.79   15.3
IHCG    85PPM HEXANE  HOT   STAB   3.52   65.3   608.8   0.56   12.3
ICOL  0.7 % CO
ICOG  0.6 % CO        1972   FTP   4.43   82.6   524.1   0.97   13.3
                      1975   FTP   4.12   74.4   518.9   0.87   13.7
OTHER TESTS:          HOT  START   4.27   71.5   527.6   0.68   13.6
       MODAL          HFET         0.91   40.7   402.4   0.40   18.9

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN DETROIT

```
                                                                      MPG
VEH                                  -----GRAMS PER MILE-----        FUEL
NO.  YR MAKE MODL CID TEST  TYPE      HC     CO     CO2    NOXC      ECON
--------------------------------------------------------------------------
049  72 CHEV NOVA 250 COLD TRANS     2.94   28.2   726.0   4.00      11.4
                      COLD  STAB     0.85   21.5   703.0   2.61      12.0
IHCL  4081PPM CARBON  HOT  TRANS     2.39   16.6   606.6   3.59      13.9
IHCG   395PPM HEXANE  HOT   STAB     0.99   24.7   676.1   2.81      12.4
ICOL  5.2 % CO
ICOG  6.8 % CO        1972   FTP     1.87   24.8   714.2   3.28      11.7
                      1975   FTP     1.71   21.5   681.1   3.17      12.3
OTHER TESTS:          HOT  START     1.67   20.8   642.3   3.19      13.0
        MODAL         HFET           0.32    4.1   470.2   3.33      18.6


050  72 CHEV MALI 307 COLD TRANS     3.23   39.1   639.6   5.73      12.5
                      COLD  STAB     3.42   39.5   640.3   4.23      12.4
IHCL  4281PPM CARBON  HOT  TRANS     2.85   22.3   556.6   6.10      14.8
IHCG   280PPM HEXANE  HOT   STAB     3.35   39.9   617.0   4.15      12.9
ICOL  4.3 % CO
ICOG  3.0 % CO        1972   FTP     3.33   39.3   640.0   4.96      12.5
                      1975   FTP     3.22   34.6   616.9   5.06      13.0
OTHER TESTS:          HOT  START     3.10   31.3   587.6   5.10      13.7
        MODAL         HFET           2.22   15.0   418.1   6.61      19.8


051  72 CHEV STAW 350 COLD TRANS     3.13   51.9   781.8   7.92      10.2
                      COLD  STAB     2.78   31.7   842.5   5.43       9.8
IHCL  2190PPM CARBON  HOT  TRANS     3.42   26.5   726.2   8.89      11.4
IHCG   320PPM HEXANE  HOT   STAB     2.71   31.5   819.1   5.27      10.1
ICOL  2.1 % CO
ICOG  2.4 % CO        1972   FTP     2.95   41.5   813.0   6.64      10.0
                      1975   FTP     3.03   34.5   797.6   6.91      10.3
OTHER TESTS:          HOT  START     3.06   29.1   773.9   7.03      10.7
   MODAL,A/C          HFET           1.72   16.3   541.2   9.34      15.5


052  72 CHEV IMPA 350 COLD TRANS     5.39   56.6   752.6   5.43      10.3
                      COLD  STAB     2.64   40.5   784.5   3.36      10.4
IHCL  2488PPM CARBON  HOT  TRANS     2.30   37.9   680.5   5.52      11.9
IHCG   280PPM HEXANE  HOT   STAB     2.80   49.5   755.5   3.36      10.5
ICOL  2.7 % CO
ICOG  3.2 % CO        1972   FTP     3.98   48.4   769.0   4.37      10.3
                      1975   FTP     3.12   43.2   749.0   4.39      10.7
OTHER TESTS:          HOT  START     2.56   43.9   719.0   4.41      11.1
   MODAL,LOADED       HFET           1.66   16.1   521.4   6.20      16.1

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN DETROIT

```
                                                                        MPG
VEH                                   -----GRAMS PER MILE-----         FUEL
NO.  YR MAKE MODL CID TEST  TYPE     HC     CO     CO2    NOXC    ECON
--------------------------------------------------------------------------
053  72 CHEV STAW 350 COLD TRANS   8.68   48.5   650.3   6.31    11.8
                      COLD  STAB   5.53   80.5   607.3   5.60    11.8
IHCL  3584PPM CARBON  HOT  TRANS   3.50   36.0   575.7   7.16    13.8
IHCG · 280PPM HEXANE  HOT   STAB   4.97   74.1   597.3   5.59    12.2
ICOL  5.2 % CO
ICOG  3.8 % CO        1972   FTP   7.06   64.9   628.2   5.95    11.8
                      1975   FTP   5.63   61.4   607.5   6.18    12.3
OTHER TESTS:          HOT  START   4.25   55.5   586.8   6.36    12.9
        MODAL         HFET         1.25    7.4   477.8   6.21    18.0


054  72 CHEV CAPR 400 COLD TRANS   5.46  119.8   740.1   6.18     9.4
                      COLD  STAB   2.83   56.7   823.4   3.91     9.6
IHCL  2787PPM CARBON  HOT  TRANS   3.03   44.3   687.8   6.63    11.6
IHCG   245PPM HEXANE  HOT   STAB   2.79   57.5   778.5   3.87    10.1
ICOL  2.8 % CO
ICOG  2.5 % CO        1972   FTP   4.11   87.4   782.8   5.02     9.5
                      1975   FTP   3.44   66.5   768.3   5.14    10.0
OTHER TESTS:          HOT  START   2.91   51.1   734.4   5.21    10.8
   MODAL,LOADED       HFET         1.98   24.6   529.4   8.24    15.5


055  72 DATS SEDA  97 COLD TRANS   4.28   39.8   378.2   6.72    19.5
                      COLD  STAB   4.08   40.3   362.4   4.12    20.2
IHCL  7566PPM CARBON  HOT  TRANS   3.01   29.8   328.1   6.54    23.1
IHCG   495PPM HEXANE  HOT   STAB   3.68   39.0   360.8   4.21    20.5
ICOL  5.2 % CO
ICOG  5.1 % CO        1972   FTP   4.17   40.1   370.1   5.38    19.9
                      1975   FTP   3.82   37.3   356.2   5.33    20.8
OTHER TESTS:          HOT  START   3.35   34.5   344.9   5.34    21.7
        MODAL         HFET         1.34    5.2   296.9   8.03    28.7


056  72 DODG DART 318 COLD TRANS   4.12   44.2   596.5   5.84    13.1
                      COLD  STAB   3.03   27.5   631.1   5.06    13.0
IHCL  2140PPM CARBON  HOT  TRANS   2.79   19.8   537.8   6.49    15.4
IHCG   260PPM HEXANE  HOT   STAB   3.04   30.4   633.4   5.52    12.8
ICOL  3.1 % CO
ICOG  3.2 % CO        1972   FTP   3.56   35.6   614.3   5.44    13.0
                      1975   FTP   3.19   28.9   598.0   5.62    13.6
OTHER TESTS:          HOT  START   2.92   25.2   586.9   5.99    14.0
        MODAL         HFET         1.80   15.1   416.2   5.13    19.9

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS ON INDIVIDUAL VEHICLES IN DETROIT

```
                                                                  MPG
VEH                                 -----GRAMS PER MILE-----     FUEL
NO.   YR MAKE MODL CID TEST  TYPE    HC     CO     CO2    NOXC   ECON
--------------------------------------------------------------------
057   72 DODG POLA 360 COLD TRANS   6.68   89.6   661.7   8.36   10.8
                       COLD  STAB   4.76   85.1   635.5   6.74   11.3
IHCL  3185PPM CARBON   HOT  TRANS   4.26   59.8   606.2   9.01   12.4
IHCG   250PPM HEXANE   HOT   STAB   4.57   82.7   589.9   5.93   12.1
ICOL  4.2 % CO
ICOG  4.4 % CO         1972   FTP   5.69   87.3   648.3   7.53   11.0
                       1975   FTP   5.02   79.0   632.9   7.71   11.5
OTHER TESTS:           HOT  START   4.42   71.5   597.8   7.43   12.3
   MODAL,LOADED        HFET         2.82   30.6   481.1   7.99   16.5


058   72 FORD PINT 122 COLD TRANS   4.83   33.0   382.7   2.88   19.7
                       COLD  STAB   1.59   21.8   462.4   2.61   17.7
IHCL  1493PPM CARBON   HOT  TRANS   1.57   19.0   393.9   3.69   20.7
IHCG   100PPM HEXANE   HOT   STAB   2.04   21.5   488.6   2.95   16.8
ICOL  1.9 % CO
ICOG  1.5 % CO         1972   FTP   3.17   27.3   423.7   2.74   18.6
                       1975   FTP   2.26   23.4   426.8   2.96   18.9
OTHER TESTS:           HOT  START   1.81   20.3   442.5   3.31   18.5
         MODAL         HFET         0.39    3.3   326.4   3.70   26.7


059   72 FORD TORI 302 COLD TRANS   4.57   58.8   716.2   6.77   10.8
                       COLD  STAB   3.01   33.8   771.8   3.99   10.6
IHCL  1354PPM CARBON   HOT  TRANS   3.32   25.7   627.5   7.03   13.1
IHCG   165PPM HEXANE   HOT   STAB   2.77   29.0   750.4   3.97   11.0
ICOL  0.1 % CO
ICOG  0.1 % CO         1972   FTP   3.77   46.0   744.7   5.34   10.7
                       1975   FTP   3.42   36.8   720.1   5.42   11.3
OTHER TESTS:           HOT  START   3.04   27.4   690.6   5.46   11.9
         MODAL         HFET         2.20   17.8   474.6   7.53   17.4


060   72 FORD LTD  351 COLD TRANS  49.32  270.7   549.8   1.86    7.8
                       COLD  STAB  36.11  201.2   590.9   1.36    8.7
IHCL  9946PPM CARBON   HOT  TRANS  32.47  156.3   527.1   2.32   10.1
IHCG  1900PPM HEXANE   HOT   STAB  36.25  200.9   604.8   1.46    8.6
ICOL  4.4 % CO
ICOG  4.6 % CO         1972   FTP  42.54  235.0   570.9   1.60    8.3
                       1975   FTP  37.87  203.3   564.6   1.73    8.8
OTHER TESTS:           HOT  START  34.41  179.2   567.0   1.88    9.3
         MODAL         HFET        24.95  121.7   395.9   2.07   13.3

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS ON INDIVIDUAL VEHICLES IN DETROIT

VEH NO.	YR MAKE MODL CID	TEST	TYPE	GRAMS PER MILE HC	CO	CO2	NOXC	MPG FUEL ECON
061	72 FORD GALA 351	COLD	TRANS	4.66	77.6	690.1	5.97	10.7
		COLD	STAB	3.44	94.8	717.5	3.04	10.1
IHCL	7964PPM CARBON	HOT	TRANS	4.08	66.6	608.5	6.38	12.2
IHCG	1020PPM HEXANE	HOT	STAB	4.10	96.4	683.2	2.85	10.5
ICOL	4.0 % CO							
ICOG	3.8 % CO	1972	FTP	4.03	86.4	704.1	4.47	10.4
		1975	FTP	3.87	83.4	681.4	4.58	10.8
OTHER TESTS:		HOT	START	4.09	81.9	646.9	4.57	11.3
	MODAL,A/C	HFET		2.54	46.6	443.8	5.52	16.9
062	72 FORD STAW 400	COLD	TRANS	7.63	131.3	786.9	6.54	8.7
		COLD	STAB	3.26	67.5	823.1	6.69	9.4
IHCL	3424PPM CARBON	HOT	TRANS	3.09	46.8	705.0	8.27	11.3
IHCG	270PPM HEXANE	HOT	STAB	3.04	61.1	789.9	6.43	9.9
ICOL	5.2 % CO							
ICOG	6.2 % CO	1972	FTP	5.39	98.5	805.5	6.62	9.1
		1975	FTP	4.13	75.1	782.7	7.10	9.7
OTHER TESTS:		HOT	START	3.07	54.2	748.6	7.32	10.5
	MODAL,LOADED	HFET		1.86	23.7	558.0	7.10	14.8
063	72 FORD THUN 429	COLD	TRANS	6.02	33.4	673.7	7.34	11.9
		COLD	STAB	4.68	29.8	700.9	4.98	11.6
IHCL	1592PPM CARBON	HOT	TRANS	3.12	16.2	637.8	8.93	13.2
IHCG	170PPM HEXANE	HOT	STAB	4.06	14.4	708.0	5.72	11.9
ICOL	1.1 % CO							
ICOG	0.9 % CO	1972	FTP	5.44	31.5	687.7	6.13	11.8
		1975	FTP	4.63	26.7	677.7	6.57	12.1
OTHER TESTS:		HOT	START	3.60	15.3	673.9	7.28	12.5
	MODAL	HFET		1.73	10.6	584.4	11.49	14.6
064	72 LINC CONT 460	COLD	TRANS	12.25	372.3	620.8	1.11	7.1
		COLD	STAB	5.03	221.7	717.1	1.35	8.2
IHCL	2190PPM CARBON	HOT	TRANS	5.48	256.3	576.3	1.28	8.9
IHCG	215PPM HEXANE	HOT	STAB	4.86	220.1	708.1	1.38	8.3
ICOL	2.9 % CO							
ICOG	3.1 % CO	1972	FTP	8.54	295.0	670.2	1.23	7.6
		1975	FTP	6.67	262.8	657.9	1.28	8.1
OTHER TESTS:		HOT	START	5.16	237.7	644.0	1.33	8.6
	MODAL	HFET		4.97	241.2	439.8	1.18	10.6

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS ON INDIVIDUAL VEHICLES IN DETROIT

```
                                                                   MPG
VEH                                     -----GRAMS PER MILE-----  FUEL
NO.  YR MAKE MODL CID TEST  TYPE    HC    CO     CO2    NOXC      ECON
----------------------------------------------------------------------
065  72 MERC MONT 400 COLD TRANS   3.04  69.5   768.5   7.98      10.0
                      COLD  STAB   3.58  45.3   716.8   6.95      11.1
IHCL  3136PPM CARBON  HOT  TRANS   3.53  31.8   698.5  10.46      11.7
IHCG   400PPM HEXANE  HOT   STAB   3.59  38.8   724.8   7.77      11.1
ICOL  2.2 % CO
ICOG  2.2 % CO        1972   FTP   3.32  57.1   742.0   7.45      10.5
                      1975   FTP   3.45  46.6   722.5   8.14      11.0
OTHER TESTS:          HOT  START   3.56  35.4   712.0   9.08      11.4
   MODAL,LOADED       HFET         1.60  10.8   574.4   9.33      14.9


066  72 OLDS CUTL 350 COLD TRANS   4.70  63.4   673.7   7.16      11.3
                      COLD  STAB   4.03  51.4   700.0   4.14      11.2
IHCL  1559PPM CARBON  HOT  TRANS   4.03  27.6   588.1   7.19      13.8
IHCG   180PPM HEXANE  HOT   STAB   3.80  44.3   675.8   3.91      11.7
ICOL  1.3 % CO
ICOG  1.1 % CO        1972   FTP   4.36  57.2   687.2   5.61      11.2
                      1975   FTP   4.17  47.3   663.5   5.62      11.8
OTHER TESTS:          HOT  START   3.91  36.1   633.1   5.51      12.6
   MODAL,A/C          HFET         2.56  15.6   468.4   7.18      17.7


067  72 OLDS 98   455 COLD TRANS   8.47  37.5   883.2   6.34       9.2
                      COLD  STAB   1.63  16.5   884.6   3.89       9.7
IHCL  1324PPM CARBON  HOT  TRANS   2.24  19.6   780.5   6.92      10.8
IHCG   145PPM HEXANE  HOT   STAB   1.66  13.9   894.5   4.10       9.6
ICOL  0.8 % CO
ICOG  1.2 % CO        1972   FTP   4.96  26.7   883.9   5.08       9.4
                      1975   FTP   3.23  21.8   855.4   5.24       9.9
OTHER TESTS:          HOT  START   1.94  16.6   839.0   5.47      10.2
   MODAL,LOADED       HFET         1.14   6.0   597.6   8.52      14.5


068  72 OPEL SEDA 116 COLD TRANS   3.25  54.2   421.6   7.33      17.2
                      COLD  STAB   1.99  18.0   420.0   7.83      19.5
IHCL  2090PPM CARBON  HOT  TRANS   2.04  23.8   368.9   7.57      21.5
IHCG   155PPM HEXANE  HOT   STAB   2.03  19.5   401.3   6.53      20.2
ICOL  1.9 % CO
ICOG  2.1 % CO        1972   FTP   2.61  35.6   420.8   7.59      18.3
                      1975   FTP   2.27  27.2   406.2   7.65      19.5
OTHER TESTS:          HOT  START   2.03  21.6   385.5   7.04      20.8
         MODAL        HFET         1.02   6.4   313.8   7.03      27.1

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS ON INDIVIDUAL VEHICLES IN DETROIT

```
VEH                                                                      MPG
                                      -----GRAMS PER MILE-----          FUEL
NO.   YR MAKE MODL CID TEST   TYPE     HC     CO     CO2    NOXC        ECON
----------------------------------------------------------------------------
069   72 PLYM VALI 225 COLD  TRANS    4.83   81.3   384.8   6.94        16.8
                       COLD   STAB    3.01   66.2   424.5   7.33        16.5
IHCL   2688PPM CARBON  HOT   TRANS    2.62   56.2   352.6   7.03        19.8
IHCG    180PPM HEXANE  HOT    STAB    3.31   73.1   391.2   5.69        17.2
ICOL  4.3 % CO
ICOG  3.2 % CO         1972    FTP    3.90   73.5   405.2   7.14        16.6
                       1975    FTP    3.29   66.6   396.2   7.17        17.4
OTHER TESTS:           HOT   START    2.97   64.8   372.4   6.34        18.3
         MODAL         HFET           1.49   25.3   294.8   7.48        26.2


070   72 PLYM FURY 318 COLD  TRANS    6.46  110.4   677.3   5.59        10.2
                       COLD   STAB    7.49  160.8   681.9   3.59         9.3
IHCL   4131PPM CARBON  HOT   TRANS    5.53  111.1   601.5   4.54        11.2
IHCG    300PPM HEXANE  HOT    STAB    7.34  169.3   680.5   3.10         9.2
ICOL  5.2 % CO
ICOG  5.6 % CO         1972    FTP    6.99  136.3   679.7   4.56         9.7
                       1975    FTP    6.73  136.5   658.6   4.27         9.9
OTHER TESTS:           HOT   START    6.46  141.0   642.0   3.80        10.0
         MODAL         HFET           3.45   54.6   483.2   4.31        15.3


071   72 PONT CATA 350 COLD  TRANS   10.35  105.1   824.9   8.71         8.7
                       COLD   STAB    8.25  120.4   705.5   9.23         9.6
IHCL   9946PPM CARBON  HOT   TRANS    6.32   73.0   662.1  11.40        11.1
IHCG    680PPM HEXANE  HOT    STAB    9.25  137.6   674.7   8.16         9.6
ICOL  5.2 % CO
ICOG  7.3 % CO         1972    FTP    9.27  113.0   763.6   8.98         9.1
                       1975    FTP    8.15  104.1   718.5   9.72         9.8
OTHER TESTS:           HOT   START    7.83  106.2   668.6   9.74        10.3
         MODAL         HFET           3.28   35.3   555.4  10.11        14.3


072   72 PONT BONN 455 COLD  TRANS    7.07   79.0   860.1   4.97         8.8
                       COLD   STAB    3.22   83.6   952.2   3.58         8.1
IHCL   5674PPM CARBON  HOT   TRANS    3.38   54.2   764.6   5.80        10.3
IHCG    360PPM HEXANE  HOT    STAB    3.80   95.2   890.3   3.42         8.4
ICOL  5.2 % CO
ICOG  5.8 % CO         1972    FTP    5.09   81.3   907.4   4.25         8.4
                       1975    FTP    4.07   74.5   880.9   4.49         8.8
OTHER TESTS:           HOT   START    3.59   75.2   829.1   4.58         9.3
         MODAL         HFET           1.78   20.7   574.0   4.90        14.5

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN DETROIT

```
                                                                     MPG
VEH                                     -----GRAMS PER MILE-----    FUEL
NO.  YR MAKE MODL CID TEST  TYPE     HC     CO     CO2    NOXC    ECON
--------------------------------------------------------------------------
073  72 TOYO CORO  97 COLD TRANS    3.92   36.7   359.6   4.06    20.7
                      COLD  STAB    2.47   25.6   423.7   2.32    18.8
IHCL  3285PPM CARBON  HOT  TRANS    2.66   22.7   332.6   3.56    23.6
IHCG   330PPM HEXANE  HOT   STAB    2.27   21.8   423.9   2.23    19.1
ICOL  2.5 % CO
ICOG  1.8 % CO        1972   FTP    3.18   31.0   392.5   3.17    19.7
                      1975   FTP    2.83   27.1   385.0   3.03    20.3
OTHER TESTS:          HOT  START    2.46   22.2   379.5   2.88    21.0
        MODAL         HFET          1.49    8.7   253.4   4.10    32.7


074  72 VOLK SEDA  97 COLD TRANS    7.16   65.5   334.5   4.10    19.3
                      COLD  STAB    8.22   75.7   382.3   3.27    16.8
IHCL  8163PPM CARBON  HOT  TRANS    5.70   50.6   321.2   4.01    21.2
IHCG   465PPM HEXANE  HOT   STAB    7.98   72.7   368.2   3.12    17.5
ICOL  5.2 % CO
ICOG  4.2 % CO        1972   FTP    7.70   70.7   359.0   3.67    17.9
                      1975   FTP    7.30   66.6   355.3   3.65    18.4
OTHER TESTS:          HOT  START    6.87   61.9   345.3   3.55    19.1
        MODAL         HFET          1.45   20.5   251.5   3.64    30.8


075  72 VOLK SEDA  97 COLD TRANS    8.79   98.6   405.7   4.79    15.1
                      COLD  STAB    4.10   73.6   420.9   3.72    16.1
IHCL  2288PPM CARBON  HOT  TRANS    3.61   54.0   375.8   4.54    18.8
IHCG   125PPM HEXANE  HOT   STAB    4.13   72.2   410.8   3.40    16.5
ICOL  3.3 % CO
ICOG  2.5 % CO        1972   FTP    6.38   85.8   413.5   4.24    15.6
                      1975   FTP    4.95   73.4   405.2   4.17    16.6
OTHER TESTS:          HOT  START    3.88   63.3   393.8   3.95    17.6
        MODAL         HFET          1.64   20.5   328.2   4.36    24.3


076  71 AMMO STAW 304 COLD TRANS    6.11   73.9   636.8   5.82    11.5
                      COLD  STAB    2.04   19.7   705.0   4.47    12.0
IHCL  1592PPM CARBON  HOT  TRANS    3.35   24.0   608.5   8.29    13.5
IHCG   210PPM HEXANE  HOT   STAB    2.30   27.3   690.6   4.40    12.0
ICOL  1.2 % CO
ICOG  2.1 % CO        1972   FTP    4.02   46.1   671.8   5.12    11.7
                      1975   FTP    3.25   32.2   664.0   5.81    12.2
OTHER TESTS:          HOT  START    2.81   25.7   650.6   6.29    12.7
        NONE          HFET          1.95   10.4   468.0   8.68    18.1

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS ON INDIVIDUAL VEHICLES IN DETROIT

```
                                                                  MPG
VEH                                    -----GRAMS PER MILE-----  FUEL
NO.  YR MAKE MODL CID TEST  TYPE    HC     CO     CO2    NOXC   ECON
--------------------------------------------------------------------
077  71 BUIC LESA 350 COLD TRANS  6.30   91.6   766.7   6.95    9.5
                      COLD  STAB  4.61   20.9   831.2   7.13   10.1
IHCL  2548PPM CARBON  HOT  TRANS  4.36   39.3   726.7   8.00   11.1
IHCG   255PPM HEXANE  HOT   STAB  4.80   31.6   831.2   7.66    9.9
ICOL  1.4 % CO
ICOG  1.1 % CO        1972   FTP  5.43   55.3   799.8   7.04    9.8
                      1975   FTP  4.89   40.8   788.7   7.34   10.2
OTHER TESTS:          HOT  START  4.58   35.3   780.4   7.83   10.4
      . NONE          HFET        2.32   18.3   555.0   7.62   15.0


078  71 BUIC ELEC 455 COLD TRANS  8.67  163.8   753.5   7.10    8.5
                      COLD  STAB  6.33  107.1   723.0   4.40    9.7
IHCL  9259PPM CARBON  HOT  TRANS  4.37   60.9   663.1   8.05   11.5
IHCG   720PPM HEXANE  HOT   STAB  6.33  109.3   681.3   4.00   10.2
ICOL  5.2 % CO
ICOG  8.0 % CO        1972   FTP  7.47  134.7   737.9   5.72    9.1
                      1975   FTP  6.28  106.1   712.8   5.98    9.9
OTHER TESTS:          HOT  START  5.37   85.7   672.4   5.97   10.8
       LOADED         HFET        2.52   27.7   556.9   7.33   14.6


079  71 CADI DEVI 472 COLD TRANS  2.43   53.3  1033.7  10.48    7.9
                      COLD  STAB  1.60   38.7  1086.3   8.05    7.7
IHCL   394PPM CARBON  HOT  TRANS  1.76   31.6   892.2  11.16    9.4
IHCG    65PPM HEXANE  HOT   STAB  1.44   39.0  1050.2   7.27    8.0
ICOL  0.7 % CO
ICOG  0.9 % CO        1972   FTP  2.00   45.8  1060.7   9.24    7.8
                      1975   FTP  1.82   39.8  1021.5   9.43    8.1
OTHER TESTS:          HOT  START  1.60   35.4   973.3   9.16    8.6
       NONE           HFET        0.66   12.6   668.5  11.10   12.9


080  71 CHEV VEGA 140 COLD TRANS  4.75   54.1   279.5   2.61   23.4
                      COLD  STAB  2.68   51.1   359.2   1.73   19.8
IHCL  3683PPM CARBON  HOT  TRANS  3.08   44.6   283.8   2.65   24.4
IHCG   240PPM HEXANE  HOT   STAB  3.15   59.9   355.7   1.53   19.3
ICOL  4.7 % CO
ICOG  3.7 % CO        1972   FTP  3.79   52.5   320.4   2.16   21.4
                      1975   FTP  3.33   49.9   321.6   2.17   21.6
OTHER TESTS:          HOT  START  3.11   52.5   320.7   2.07   21.5
       NONE           HFET        1.32   20.1   234.7   3.45   32.8

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

```
             LISTING OF FEDERAL TEST PROCEDURE RESULTS
                ON INDIVIDUAL VEHICLES IN DETROIT

                                                                 MPG
VEH                                   -----GRAMS PER MILE-----  FUEL
NO.  YR MAKE MODL CID TEST   TYPE    HC     CO    CO2    NOXC   ECON
--------------------------------------------------------------------
081  71 CHEV MALI 307 COLD TRANS   6.30   57.4  577.6   4.86   12.9
                      COLD  STAB   3.58   28.1  636.1   4.26   12.8
IHCL  3783PPM CARBON  HOT  TRANS   3.40   27.0  529.1   5.30   15.2
IHCG   300PPM HEXANE  HOT   STAB   3.21   31.8  645.7   3.79   12.6
ICOL  3.5 % CO
ICOG  2.6 % CO        1972   FTP   4.91   42.3  607.6   4.56   12.9
                      1975   FTP   4.10   33.9  594.2   4.68   13.4
OTHER TESTS:          HOT  START   3.30   29.4  589.0   4.53   13.7
        NONE          HFET         1.44   16.1  461.0   3.20   18.1


082  71 CHEV MONT 350 COLD TRANS   9.26  131.2  606.7   3.32   10.5
                      COLD  STAB   8.93  172.4  617.5   2.04    9.7
IHCL  3733PPM CARBON  HOT  TRANS   7.38  112.4  534.6   3.51   12.1
IHCG   400PPM HEXANE  HOT   STAB   8.31  187.3  605.8   2.09    9.6
ICOL  5.2 % CO
ICOG  5.4 % CO        1972   FTP   9.09  152.3  612.2   2.66   10.1
                      1975   FTP   8.57  147.1  592.3   2.71   10.4
OTHER TESTS:          HOT  START   7.86  150.9  571.2   2.78   10.7
        NONE          HFET         5.24   63.2  412.8   3.06   16.8


083  71 CHEV STAW 350 COLD TRANS   4.38   77.4  727.2   8.37   10.3
                      COLD  STAB   4.16   65.3  695.3   6.13   10.9
IHCL  4151PPM CARBON  HOT  TRANS   3.32   59.2  644.9   7.82   11.9
IHCG   430PPM HEXANE  HOT   STAB   4.34   74.4  680.4   5.89   10.9
ICOL  4.8 % CO
ICOG  5.1 % CO        1972   FTP   4.27   71.2  710.8   7.22   10.6
                      1975   FTP   3.97   66.1  688.0   7.07   11.0
OTHER TESTS:          HOT  START   3.84   67.0  663.1   6.83   11.4
        A/C           HFET         1.92   27.8  545.6   8.18   14.9


084  71 CHEV MALI 350 COLD TRANS  12.20  123.6  574.6   4.37   11.0
                      COLD  STAB   5.36   85.9  571.8   3.21   12.3
IHCL  3833PPM CARBON  HOT  TRANS   4.52   49.0  540.5   5.28   14.0
IHCG   370PPM HEXANE  HOT   STAB.  5.33   81.3  568.1   3.04   12.5
ICOL  4.0 % CO
ICOG  3.6 % CO        1972   FTP   8.69  104.3  573.1   3.78   11.6
                      1975   FTP   6.56   83.6  563.7   4.03   12.4
OTHER TESTS:          HOT  START   4.93   65.6  554.7   4.13   13.2
        NONE          HFET         3.27   26.2  447.0   5.17   17.8

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN DETROIT

```
                                                                      MPG
VEH                                     -----GRAMS PER MILE-----     FUEL
NO.  YR MAKE MODL CID TEST   TYPE    HC      CO      CO2    NOXC    ECON
------------------------------------------------------------------------
085  71 CHEV IMPA 400 COLD TRANS   3.81    41.2   725.2    7.28    11.1
                      COLD  STAB   2.44    13.0   807.6    6.74    10.6
IHCL  1493PPM CARBON  HOT  TRANS   2.66    16.5   668.3    8.36    12.6
IHCG   160PPM HEXANE  HOT   STAB   2.27    13.6   768.1    6.49    11.1
ICOL  0.1 % CO
ICOG  0.1 % CO        1972   FTP   3.10    26.8   767.5    7.00    10.8
                      1975   FTP   2.79    19.9   751.7    7.31    11.2
OTHER TESTS:          HOT  START   2.46    15.0   719.5    7.40    11.8
       LOADED         HFET         1.19    12.9   482.7    7.15    17.5


086  71 CHRY 300  440 COLD TRANS   7.94    90.2   823.6    2.99     9.0
                      COLD  STAB   2.00    36.7   870.5    2.29     9.5
IHCL  2688PPM CARBON  HOT  TRANS   2.71    41.5   754.7    3.20    10.7
IHCG   455PPM HEXANE  HOT   STAB   2.26    34.4   859.4    2.33     9.6
ICOL  0.2 % CO
ICOG  0.2 % CO        1972   FTP   4.89    62.7   847.6    2.63     9.2
                      1975   FTP   3.44    49.2   828.5    2.69     9.7
OTHER TESTS:          HOT  START   2.48    37.8   808.5    2.76    10.1
       NONE           HFET         1.56    29.4   626.1    2.94    13.1


087  71 DATS SEDA  71 COLD TRANS  19.95    82.9   254.5    2.19    19.8
                      COLD  STAB   2.80    21.6   297.7    2.64    26.1
IHCL  3783PPM CARBON  HOT  TRANS   2.64    18.2   254.1    3.03    30.5
IHCG   280PPM HEXANE  HOT   STAB   2.71    19.6   288.0    2.55    27.1
ICOL  3.8 % CO
ICOG  2.8 % CO        1972   FTP  11.15    51.4   276.7    2.42    22.6
                      1975   FTP   6.35    33.5   276.6    2.65    25.4
OTHER TESTS:          HOT  START   2.67    18.9   271.5    2.78    26.7
       NONE           HFET         1.42    10.2   246.4    4.43    33.2


088  71 DODG CHAR 318 COLD TRANS   5.39    77.3   735.1    5.70    10.2
                      COLD  STAB   3.00    40.3   669.1    4.77    12.0
IHCL   398PPM CARBON  HOT  TRANS   2.74    28.0   641.4    6.74    12.8
IHCG    90PPM HEXANE  HOT   STAB   2.80    32.5   670.7    5.01    12.1
ICOL  0.1 % CO
ICOG  0.2 % CO        1972   FTP   4.16    58.3   701.2    5.22    11.0
                      1975   FTP   3.43    44.6   675.2    5.51    11.7
OTHER TESTS:          HOT  START   2.77    30.3   656.4    5.85    12.5
       LOADED         HFET         1.34     7.7   521.1    6.95    16.5

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS ON INDIVIDUAL VEHICLES IN DETROIT

```
                                                                       MPG
VEH                                    -----GRAMS PER MILE-----       FUEL
NO.  YR MAKE MODL CID TEST   TYPE     HC      CO     CO2     NOXC     ECON
----------------------------------------------------------------------------
089  71 FORD PINT 122 COLD TRANS     3.48    40.7   370.0    6.87     19.9
                      COLD  STAB     3.37     7.5   385.0    7.36     21.8
IHCL  1129PPM CARBON  HOT  TRANS     3.02    13.1   312.3    7.43     25.9
IHCG   165PPM HEXANE  HOT   STAB     3.20     4.5   360.1    6.86     23.5
ICOL  0.2 % CO
ICOG  0.4 % CO        1972   FTP     3.43    23.6   377.7    7.12     20.8
                      1975   FTP     3.30    16.0   361.7    7.27     22.3
OTHER TESTS:          HOT  START     3.11     8.7   336.9    7.13     24.6
        NONE          HFET           1.34     3.8   257.7    7.31     33.1


090  71 FORD MAVE 200 COLD TRANS     4.00    12.9   537.9    7.86     15.5
                      COLD  STAB     2.81    41.5   468.2    5.99     16.4
IHCL  3345PPM CARBON  HOT  TRANS     2.52    21.6   427.7    8.03     18.9
IHCG   290PPM HEXANE  HOT   STAB     2.68    36.9   457.3    5.36     16.9
ICOL  5.2 % CO
ICOG  6.8 % CO        1972   FTP     3.39    27.6   502.2    6.90     16.0
                      1975   FTP     2.98    30.0   471.6    6.95     16.8
OTHER TESTS:          HOT  START     2.60    29.5   442.9    6.66     17.8
        NONE          HFET           1.43     6.2   353.7    7.17     24.1


091  71 FORD TORI 302 COLD TRANS     5.59    65.9   591.9    6.62     12.4
                      COLD  STAB     3.66    62.3   602.0    4.29     12.5
IHCL  3484PPM CARBON  HOT  TRANS     3.30    32.8   538.5    7.62     14.8
IHCG   320PPM HEXANE  HOT   STAB     3.45    52.6   604.9    4.68     12.7
ICOL  5.2 % CO
ICOG  3.5 % CO        1972   FTP     4.60    64.1   597.1    5.42     12.5
                      1975   FTP     3.96    54.9   582.3    5.70     13.0
OTHER TESTS:          HOT  START     3.38    42.9   572.6    6.11     13.6
        LOADED        HFET           2.40     8.5   461.4    7.23     18.4


092  71 FORD LTD  351 COLD TRANS     7.76   102.0   623.0    4.93     11.0
                      COLD  STAB     3.93    41.6   681.1    4.23     11.7
IHCL  2588PPM CARBON  HOT  TRANS     4.86    35.8   650.2    7.10     12.3
IHCG   270PPM HEXANE  HOT   STAB     3.79    34.6   744.1    4.64     11.0
ICOL  2.0 % CO
ICOG  1.5 % CO        1972   FTP     5.80    71.0   652.8    4.57     11.3
                      1975   FTP     4.99    52.6   660.3    5.17     11.7
OTHER TESTS:          HOT  START     4.31    35.2   698.4    5.84     11.6
        A/C           HFET           2.29    25.3   505.0    6.73     16.1

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN DETROIT

```
                                                                    MPG
VEH                                    -----GRAMS PER MILE-----    FUEL
NO.   YR MAKE MODL CID TEST   TYPE     HC      CO     CO2    NOXC   ECON
-------------------------------------------------------------------------
093   71 FORD LTD  400 COLD TRANS    4.21    67.9   758.8   8.31   10.1
                       COLD  STAB    2.83    39.5   785.8   8.17   10.4
IHCL   1891PPM CARBON  HOT  TRANS    2.54    24.5   665.0   9.82   12.5
IHCG    155PPM HEXANE  HOT   STAB    2.77    42.1   757.2   7.46   10.7
ICOL   2.8 % CO
ICOG   2.6 % CO        1972   FTP    3.50    53.3   772.6   8.24   10.2
                       1975   FTP    3.04    41.3   746.6   8.65   10.8
OTHER TESTS:           HOT  START    2.66    33.5   712.3   8.61   11.5
         NONE          HFET          1.32     9.5   536.9  10.20   16.0


094   71 MERC MONT 400 COLD TRANS    4.48    84.1   521.5   4.83   13.3
                       COLD  STAB    2.59    49.1   628.4   6.17   12.4
IHCL   2887PPM CARBON  HOT  TRANS    2.64    26.3   552.6   7.37   14.7
IHCG    230PPM HEXANE  HOT   STAB    2.30    41.2   596.5   5.85   13.3
ICOL   4.2 % CO
ICOG   4.0 % CO        1972   FTP    3.51    66.2   576.3   5.52   12.8
                       1975   FTP    3.00    50.1   585.0   6.22   13.2
OTHER TESTS:           HOT  START    2.47    34.0   575.1   6.59   13.9
         LOADED        HFET          1.32     8.6   546.8   8.17   15.7


095   71 OLDS CUTL 350 COLD TRANS    4.13    49.0   714.6   4.20   11.0
                       COLD  STAB    2.74    30.9   728.3   5.95   11.3
IHCL   3932PPM CARBON  HOT  TRANS    2.25    17.8   585.9   7.46   14.3
IHCG    290PPM HEXANE  HOT   STAB    2.66    34.2   686.3   5.09   11.9
ICOL   5.2 % CO
ICOG   4.2 % CO        1972   FTP    3.41    39.8   721.6   5.10   11.2
                       1975   FTP    2.89    31.1   685.9   6.00   11.9
OTHER TESTS:           HOT  START    2.46    26.2   637.4   6.24   12.9
         NONE          HFET          1.68    13.7   448.3   7.14   18.7


096   71 OLDS DELT 455 COLD TRANS    3.12    95.7   778.4   7.00    9.5
                       COLD  STAB    1.66    24.2   854.5   4.56    9.9
IHCL   1045PPM CARBON  HOT  TRANS    2.47    24.7   686.6   7.83   12.1
IHCG    120PPM HEXANE  HOT   STAB    1.73    25.4   804.6   3.93   10.4
ICOL   1.1 % CO
ICOG   1.2 % CO        1972   FTP    2.37    59.0   817.4   5.75    9.7
                       1975   FTP    2.19    39.3   792.0   5.98   10.3
OTHER TESTS:           HOT  START    2.09    25.1   747.1   5.83   11.2
         A/C           HFET          1.19    16.3   515.2   8.26   16.3

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN DETROIT

```
                                                                     MPG
VEH                                  -----GRAMS PER MILE-----       FUEL
NO.  YR MAKE MODL CID TEST  TYPE     HC     CO     CO2    NOXC      ECON
--------------------------------------------------------------------------
097  71 PLYM VALT 225 COLD TRANS   5.42   84.8   462.0   7.29      14.5
                      COLD  STAB   3.72   49.5   456.1   7.48      16.3
THCL  2538PPM CARBON  HOT  TRANS   3.24   41.1   434.1   8.51      17.4
THCG   250PPM HEXANE  HOT   STAB   3.70   48.4   460.2   7.30      16.2
ICOL  3.2 % CO
ICOG  3.2 % CO        1972   FTP   4.55   66.7   459.0   7.38      15.3
                      1975   FTP   3.94   54.6   451.2   7.72      16.2
OTHER TESTS:          HOT  START   3.47   44.8   447.5   7.89      16.8
        NONE          HFET         1.51   17.6   374.2   7.80      21.8


098  71 PLYM SATE 318 COLD TRANS   5.06   59.7   612.1   6.41      12.3
                      COLD  STAB   4.24   60.2   569.0   5.49      13.1
THCL  2389PPM CARBON  HOT  TRANS   3.05   32.7   552.6   7.41      14.5
THCG   205PPM HEXANE  HOT   STAB   4.20   64.5   559.9   5.37      13.2
ICOL  2.9 % CO
ICOG  3.1 % CO        1972   FTP   4.64   60.0   590.0   5.94      12.7
                      1975   FTP   4.08   52.5   573.5   6.22      13.3
OTHER TESTS:          HOT  START   3.64   49.0   556.3   6.36      13.8
        A/C           HFET         2.44   20.1   474.5   7.66      17.3


099  71 PONT FIRE 350 COLD TRANS   5.74   49.4   703.8   4.09      11.1
                      COLD  STAB   3.03   42.6   671.8   2.66      11.9
THCL  3484PPM CARBON  HOT  TRANS   2.31   23.1   638.4   3.77      13.0
THCG   305PPM HEXANE  HOT   STAB   2.54   37.0   667.7   2.59      12.1
ICOL  4.0 % CO
ICOG  4.0 % CO        1972   FTP   4.35   45.9   687.4   3.36      11.5
                      1975   FTP   3.40   38.6   669.2   3.27      12.0
OTHER TESTS:          HOT  START   2.43   30.3   653.4   3.17      12.5
        NONE          HFET         1.07   10.3   540.1   3.53      15.9


100  71 PONT GTO  400 COLD TRANS   4.72   48.7   749.7   7.12      10.6
                      COLD  STAB   4.73   79.8   669.0   3.43      11.0
THCL  4878PPM CARBON  HOT  TRANS   3.66   40.9   639.2   8.00      12.4
THCG   420PPM HEXANE  HOT   STAB   4.43   73.3   652.1   3.26      11.4
ICOL  5.2 % CO
ICOG  6.2 % CO        1972   FTP   4.73   64.7   708.3   5.23      10.8
                      1975   FTP   4.43   62.5   677.6   5.47      11.2
OTHER TESTS:          HOT  START   4.06   57.5   645.8   5.56      11.8
        LOADED        HFET         4.52   12.4   598.1  11.48      14.0

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

```
                LISTING OF FEDERAL TEST PROCEDURE RESULTS
                   ON INDIVIDUAL VEHICLES IN DETROIT

                                                                         MPG
VEH                                      -----GRAMS PER MILE-----       FUEL
NO.  YR MAKE MODL CID TEST   TYPE    HC      CO      CO2    NOXC      ECON
-----------------------------------------------------------------------------
101   71 TOYO CORO  97 COLD TRANS  6.73    39.7    289.2    5.49      23.8
                       COLD  STAB  4.09    51.3    299.1    3.98      22.6
IHCL  4778PPM CARBON   HOT  TRANS  3.30    32.6    272.6    5.29      26.6
IHCG   350PPM HEXANE   HOT   STAB  4.40    52.2    300.1    3.97      22.4
ICOL  4.9 % CO
ICOG  3.8 % CO         1972   FTP  5.37    45.6    294.3    4.71      23.2
                       1975   FTP  4.42    43.7    289.7    4.66      23.8
OTHER TESTS:           HOT  START  3.87    42.7    286.7    4.62      24.2
        NONE           HFET        1.71    18.1    262.7    5.99      29.9


102  71 VOLK SEDA   97 COLD TRANS  4.91    62.0    335.1    3.92      19.8
                       COLD  STAB  3.73    42.0    384.0    2.94      19.2
IHCL  2488PPM CARBON   HOT  TRANS  2.96    32.4    312.4    3.59      23.8
IHCG   220PPM HEXANE   HOT   STAB  4.09    37.6    377.8    2.86      19.7
ICOL  0.9 % CO
ICOG  0.7 % CO         1972   FTP  4.30    51.8    360.2    3.42      19.5
                       1975   FTP  3.76    43.5    353.9    3.33      20.4
OTHER TESTS:           HOT  START  3.54    35.0    345.9    3.21      21.5
        NONE           HFET        1.34    18.3    248.1    3.80      31.6


103  70 BUIC STAW 455 COLD TRANS   7.11   106.2    699.7    9.63      10.0
                      COLD  STAB   9.09    71.2    674.3   10.22      10.9
IHCL  4977PPM CARBON  HOT  TRANS   4.61    33.9    651.0   13.67      12.3
IHCG   340PPM HEXANE  HOT   STAB   5.37    37.7    727.4   12.77      11.0
ICOL  5.2 % CO
ICOG  3.8 % CO        1972   FTP   8.13    88.2    686.6    9.93      10.4
                      1975   FTP   7.43    68.2    673.1   11.05      11.0
OTHER TESTS:          HOT  START   5.00    35.8    690.2   13.20      11.6
        NONE          HFET         2.83    41.4    570.4   13.01      13.8


104  70 CHEV NOVA 250 COLD TRANS   5.42    67.9    484.3    6.13      14.6
                      COLD  STAB   2.91    44.1    539.6    4.92      14.4
IHCL  4231PPM CARBON  HOT  TRANS   2.93    30.2    467.3    7.56      16.9
IHCG   250PPM HEXANE  HOT   STAB   2.85    46.1    515.1    5.21      14.9
ICOL  5.2 % CO
ICOG  5.2 % CO        1972   FTP   4.13    55.7    512.7    5.51      14.5
                      1975   FTP   3.44    45.2    508.0    5.90      15.0
OTHER TESTS:          HOT  START   2.89    38.4    491.8    6.35      15.8
        NONE          HFET         1.32     5.2    363.4    8.25      23.6

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS ON INDIVIDUAL VEHICLES IN DETROIT

```
VEH                                                                  MPG
                                      -----GRAMS PER MILE-----      FUEL
NO.  YR MAKE MODL CID TEST   TYPE    HC     CO     CO2     NOXC     ECON
--------------------------------------------------------------------------
105   70 CHEV NOVA 307 COLD TRANS   7.72   63.0   559.4    8.64    13.0
                       COLD  STAB   7.12   73.1   562.5    6.59    12.7
IHCL   6371PPM CARBON  HOT  TRANS   5.51   51.4   512.7    8.78    14.5
IHCG    560PPM HEXANE  HOT   STAB   6.72   71.5   554.2    6.78    12.9
ICOL   5.2 % CO
ICOG   4.5 % CO        1972   FTP   7.41   68.2   561.0    7.59    12.8
                       1975   FTP   6.80   64.9   548.0    7.63    13.2
OTHER TESTS:           HOT  START   6.13   61.7   534.0    7.76    13.6
         NONE          HFET         3.98   41.6   410.4    7.81    18.2


106   70 CHEV IMPA 350 COLD TRANS  34.91   91.3   596.1    6.24    10.4
                       COLD  STAB  30.80   84.0   639.2    5.38    10.2
IHCL   9946PPM CARBON  HOT  TRANS  27.62   62.5   560.4    6.28    11.9
IHCG   1600PPM HEXANE  HOT   STAB  30.59   98.2   619.1    4.76    10.2
ICOL   4.7 % CO
ICOG   3.4 % CO        1972   FTP  32.80   87.5   618.2    5.80    10.3
                       1975   FTP  30.78   79.5   608.3    5.81    10.7
OTHER TESTS:           HOT  START  29.15   80.8   590.5    5.50    11.0
         NONE          HFET        16.40   25.6   454.8    6.12    16.2


107   70 CHEV MONT 350 COLD TRANS   6.63   96.6   580.5    5.86    11.8
                       COLD  STAB   4.67  120.5   508.9    3.10    12.4
IHCL   3982PPM CARBON  HOT  TRANS   3.72   75.9   483.8    5.53    14.4
IHCG    370PPM HEXANE  HOT   STAB   5.08  128.7   498.2    2.93    12.4
ICOL   5.2 % CO
ICOG   5.5 % CO        1972   FTP   5.62  108.9   543.6    4.44    12.1
                       1975   FTP   4.82  103.1   516.9    4.35    12.8
OTHER TESTS:           HOT  START   4.42  103.0   491.2    4.19    13.3
         LOADED        HFET         2.64   48.2   390.2    5.04    18.7


108   70 CHEV IMPA 350 COLD TRANS   9.03   65.6   590.6    9.84    12.3
                       COLD  STAB   8.39   98.2   577.7    6.99    11.7
IHCL   9946PPM CARBON  HOT  TRANS   6.79   54.2   605.9    9.38    12.5
IHCG    840PPM HEXANE  HOT   STAB   7.99   91.7   608.7    8.18    11.4
ICOL   5.2 % CO
ICOG   7.2 % CO        1972   FTP   8.70   82.3   584.0    8.38    12.0
                       1975   FTP   8.08   79.2   588.2    8.25    12.0
OTHER TESTS:           HOT  START   7.40   73.4   607.3    8.76    11.9
         LOADED        HFET         3.47   22.9   518.0   11.62    15.7

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN DETROIT

```
VEH                                                                       MPG
                                          -----GRAMS PER MILE-----        FUEL
NO.   YR MAKE MODL CID TEST  TYPE     HC     CO      CO2     NOXC         ECON
------------------------------------------------------------------------------
109   70 CHEV CAPR 400 COLD TRANS   8.28  120.6    660.5    6.20        10.1
                       COLD  STAB   5.47   93.7    642.8    5.03        11.0
IHCL   5177PPM CARBON  HOT  TRANS   4.53   69.2    589.8    6.77        12.4
IHCG    365PPM HEXANE  HOT   STAB   5.15   91.1    629.7    4.44        11.2
ICOL   5.2 % CO
ICOG   5.4 % CO        1972   FTP   6.84  106.8    651.4    5.60        10.6
                       1975   FTP   5.60   92.5    631.8    5.76        11.2
OTHER TESTS:           HOT  START   4.85   80.4    610.3    5.57        11.8
         NONE          HFET         2.59   42.2    472.3    7.06        16.2


110   70 DODG POLA 383 COLD TRANS   6.21   73.0    602.3    7.31        12.0
                       COLD  STAB   4.51   78.8    656.4    6.57        11.2
IHCL   2190PPM CARBON  HOT  TRANS   3.61   55.5    592.6    8.46        12.8
IHCG    140PPM HEXANE  HOT   STAB   4.23   76.2    650.6    6.75        11.3
ICOL   3.4 % CO
ICOG   2.4 % CO        1972   FTP   5.34   76.0    630.1    6.93        11.6
                       1975   FTP   4.62   71.1    627.4    7.25        11.8
OTHER TESTS:           HOT  START   3.93   66.1    622.4    7.58        12.0
         NONE          HFET         1.99   17.9    494.2    9.52        16.8


111   70 FORD MAVE 200 COLD TRANS   3.20   46.4    465.6    9.06        16.2
                       COLD  STAB   2.67   37.9    459.9    7.95        16.8
IHCL   2887PPM CARBON  HOT  TRANS   2.40   19.4    416.8    9.35        19.5
IHCG    285PPM HEXANE  HOT   STAB   2.56   37.8    440.6    7.36        17.5
ICOL   5.2 % CO
ICOG   4.5 % CO        1972   FTP   2.93   42.0    462.7    8.49        16.5
                       1975   FTP   2.71   34.5    449.1    8.57        17.3
OTHER TESTS:           HOT  START   2.48   28.8    429.0    8.33        18.4
         NONE          HFET         1.36    5.4    332.5   10.05        25.7


112   70 FORD FAIR 302 COLD TRANS   7.98   51.1    543.5    9.30        13.7
                       COLD  STAB   5.47   85.9    542.6    5.05        12.8
IHCL   4878PPM CARBON  HOT  TRANS   4.20   40.4    481.6    9.86        15.9
IHCG    400PPM HEXANE  HOT   STAB   4.09   70.6    528.6    5.08        13.6
ICOL   5.2 % CO
ICOG   4.8 % CO        1972   FTP   6.69   68.9    542.9    7.12        13.2
                       1975   FTP   5.64   66.0    525.8    7.27        13.7
OTHER TESTS:           HOT  START   4.14   55.9    505.7    7.40        14.6
         NONE          HFET         2.36   13.4    421.0   10.97        19.7

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS ON INDIVIDUAL VEHICLES IN DETROIT

```
                                                                       MPG
VEH                                      -----GRAMS PER MILE-----     FUEL
NO.  YR MAKE MODL CID TEST  TYPE     HC     CO     CO2    NOXC        ECON
----------------------------------------------------------------------------
113  70 FORD GALA 351 COLD TRANS  11.25   86.3   565.4   8.14        12.0
                      COLD  STAB   7.16  125.9   594.1   6.21        10.9
IHCL  7964PPM CARBON  HOT   TRANS  5.16   71.4   536.2   8.89        13.4
IHCG   480PPM HEXANE  HOT   STAB   5.59  115.1   555.4   5.71        11.8
ICOL  5.2 % CO
ICOG  5.5 % CO        1972   FTP   9.15  106.6   580.2   7.15        11.4
                      1975   FTP   7.46  102.5   572.0   7.36        11.7
OTHER TESTS:          HOT   START  5.38   93.9   546.0   7.26        12.5
        NONE          HFET         2.41   26.3   437.7   8.68        18.2


114  70 FORD LTD  351 COLD TRANS   7.84  151.2   572.5   4.73        10.6
                      COLD  STAB   2.76   32.5   650.9   5.24        12.5
IHCL   696PPM CARBON  HOT   TRANS  3.38   32.8   574.7   7.40        13.9
IHCG    80PPM HEXANE  HOT   STAB   2.42   26.6   636.7   5.11        12.9
ICOL  0.1 % CO
ICOG  0.1 % CO        1972   FTP   5.23   90.3   612.7   4.99        11.5
                      1975   FTP   3.99   57.4   613.5   5.73        12.4
OTHER TESTS:          HOT   START  2.89   29.6   606.5   6.22        13.4
        LOADED        HFET         2.35   25.0   454.0   6.91        17.7


115  70 FORD LTD  390 COLD TRANS   6.44   93.1   665.3   3.80        10.7
                      COLD  STAB   2.59   38.3   698.2   3.10        11.6
IHCL  9946PPM CARBON  HOT   TRANS  3.13   39.4   619.1   4.51        12.8
IHCG   560PPM HEXANE  HOT   STAB   2.83   45.1   681.4   2.98        11.7
ICOL  5.2 % CO
ICOG  6.2 % CO        1972   FTP   4.46   65.0   682.2   3.44        11.1
                      1975   FTP   3.55   50.1   669.4   3.64        11.7
OTHER TESTS:          HOT   START  2.98   42.3   651.1   3.72        12.2
        LOADED        HFET         1.91   31.1   519.8   3.85        15.4


116  70 MERC MARA 429 COLD TRANS   6.79  155.3   713.1   4.74         9.1
                      COLD  STAB   3.40   55.9   777.5   4.53        10.1
IHCL  3086PPM CARBON  HOT   TRANS  3.28   35.2   661.6   7.52        12.2
IHCG   250PPM HEXANE  HOT   STAB   2.65   40.9   757.1   4.78        10.7
ICOL  4.9 % CO
ICOG  5.3 % CO        1972   FTP   5.05  104.3   746.1   4.63         9.6
                      1975   FTP   4.07   71.0   731.8   5.41        10.4
OTHER TESTS:          HOT   START  2.96   38.1   710.6   6.12        11.4
        LOADED        HFET         2.19   14.6   535.5   7.82        15.7

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN DETROIT

```
                                                                    MPG
VEH                                    -----GRAMS PER MILE-----    FUEL
NO.  YR MAKE MODL CID TEST  TYPE    HC     CO     CO2    NOXC   ECON
-------------------------------------------------------------------------
117  70 OLDS CUTL 350 COLD TRANS  5.35   81.3   632.4   6.15   11.4
                      COLD  STAB  3.61   46.1   720.4   5.13   11.0
IHCL  1692PPM CARBON  HOT  TRANS  4.12   35.8   536.8   5.37   14.6
IHCG   120PPM HEXANE  HOT   STAB  3.61   39.0   633.1   3.28   12.6
ICOL  1.1 % CO
ICOG  0.8 % CO        1972   FTP  4.46   63.2   677.5   5.63   11.2
                      1975   FTP  4.12   50.6   651.0   5.41   11.9
OTHER TESTS:          HOT  START  3.86   37.4   586.2   4.30   13.5
        NONE          HFET        2.97    4.7   445.3   6.10   19.2


118  70 OLDS 98   455 COLD TRANS  2.18   16.8   789.0   8.65   10.8
                      COLD  STAB  2.29   16.0   813.9   5.83   10.5
IHCL   796PPM CARBON  HOT  TRANS  2.95   16.4   700.9   8.10   12.1
IHCG    80PPM HEXANE  HOT   STAB  2.45   16.4   789.2   5.24   10.8
ICOL  0.1 % CO
ICOG  0.1 % CO        1972   FTP  2.23   16.4   801.8   7.20   10.6
                      1975   FTP  2.45   16.3   777.4   7.05   10.9
OTHER TESTS:          HOT  START  2.69   16.4   746.2   6.63   11.4
        LOADED        HFET        1.50    4.8   543.8   8.38   16.0


119  70 PLYM SATE 318 COLD TRANS  3.95   46.0   647.8   8.72   12.1
                      COLD  STAB  4.39   72.6   616.6   7.33   11.9
IHCL  4579PPM CARBON  HOT  TRANS  3.16   41.2   556.8   8.21   14.1
IHCG   245PPM HEXANE  HOT   STAB  4.30   80.0   617.4   7.28   11.7
ICOL  5.2 % CO
ICOG  5.3 % CO        1972   FTP  4.18   59.6   631.8   8.01   12.0
                      1975   FTP  3.96   58.3   606.6   7.87   12.5
OTHER TESTS:          HOT  START  3.74   61.1   587.9   7.74   12.8
        NONE          HFET        1.98   18.9   438.8   8.30   18.7


120  70 PLYM FURY 318 COLD TRANS  5.38   85.8   548.1   5.95   12.7
                      COLD  STAB  5.66  147.9   544.9   5.14   11.2
IHCL  6770PPM CARBON  HOT  TRANS  4.15   72.9   494.7   6.44   14.3
IHCG   400PPM HEXANE  HOT   STAB  4.97  111.7   525.6   4.84   12.4
ICOL  5.2 % CO
ICOG  6.8 % CO        1972   FTP  5.53  117.7   546.5   5.53   11.9
                      1975   FTP  5.18  114.1   531.6   5.67   12.2
OTHER TESTS:          HOT  START  4.57   92.8   510.5   5.62   13.2
        NONE          HFET        2.36   35.4   415.9   6.47   18.5

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN DETROIT

```
                                                                 MPG
VEH                                     -----GRAMS PER MILE-----  FUEL
NO.  YR MAKE MODL CID TEST  TYPE    HC     CO     CO2    NOXC   ECON
----------------------------------------------------------------------
121  70 PONT FIRE 350 COLD TRANS   6.53   76.2   630.2   7.31   11.5
                      COLD  STAB   6.18  122.3   598.8   4.87   10.9
IHCL  9946PPM CARBON  HOT  TRANS   4.53   60.8   557.4   7.43   13.3
IHCG   610PPM HEXANE  HOT   STAB   7.63  133.4   579.2   5.49   10.9
ICOL  5.2 % CO
ICOG  7.1 % CO        1972   FTP   6.35   99.9   614.1   6.06   11.2
                      1975   FTP   5.79   95.6   593.9   6.09   11.6
OTHER TESTS:          HOT  START   6.12   98.0   568.6   6.43   12.0
        NONE          HFET         2.78   27.2   453.2   6.67   17.6


122  70 PONT STAW 400 COLD TRANS   6.68  126.8   806.6   9.07    8.6
                      COLD  STAB   5.19   80.8   785.1   8.86    9.6
IHCL  3484PPM CARBON  HOT  TRANS   3.84   49.1   685.1  10.93   11.5
IHCG   300PPM HEXANE  HOT   STAB   4.73   71.8   758.7   8.77   10.0
ICOL  3.5 % CO
ICOG  2.9 % CO        1972   FTP   5.91  103.2   795.6   8.96    9.1
                      1975   FTP   5.13   81.6   761.9   9.48    9.8
OTHER TESTS:          HOT  START   4.29   60.7   722.9   9.82   10.7
        NONE          HFET         2.12   16.6   525.5  12.52   15.9


123  70 TOYO CORO 116 COLD TRANS   3.61   48.4   378.8   5.74   19.0
                      COLD  STAB   3.30   66.1   381.4   3.97   17.9
IHCL  6272PPM CARBON  HOT  TRANS   3.27   31.9   352.6   5.89   21.5
IHCG   380PPM HEXANE  HOT   STAB   3.43   67.6   397.0   4.35   17.3
ICOL  5.2 % CO
ICOG  6.4 % CO        1972   FTP   3.45   57.5   380.1   4.83   18.4
                      1975   FTP   3.36   52.9   372.9   4.87   19.0
OTHER TESTS:          HOT  START   3.35   50.2   375.4   5.10   19.1
        NONE          HFET         1.56   13.2   308.0   7.09   26.6


124  70 VOLK SEDA  97 COLD TRANS   3.46   36.2   349.7   2.80   21.3
                      COLD  STAB   2.68   21.3   427.1   2.20   18.9
IHCL  1592PPM CARBON  HOT  TRANS   2.39   19.6   329.4   2.70   24.1
IHCG   200PPM HEXANE  HOT   STAB   3.77   22.9   409.3   2.01   19.4
ICOL  0.1 % CO
ICOG  0.1 % CO        1972   FTP   3.06   28.5   389.4   2.49   20.0
                      1975   FTP   2.76   23.9   383.8   2.47   20.6
OTHER TESTS:          HOT  START   3.10   21.2   370.4   2.35   21.5
        NONE          HFET         0.89    8.0   255.5   2.83   32.8

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN DETROIT

```
                                                                MPG
VEH                                   -----GRAMS PER MILE-----  FUEL
NO.  YR MAKE MODL CID TEST   TYPE    HC     CO     CO2    NOXC  FCON
----------------------------------------------------------------------
125  69 AMMO AMBA 343 COLD TRANS   8.94  106.3   569.0   4.35   11.6
                      COLD  STAB   6.37  128.1   597.5   2.67   10.8
IHCL  3882PPM CARBON  HOT  TRANS   6.01  115.3   515.0   3.78   12.4
IHCG   300PPM HEXANE  HOT   STAB   6.30  139.7   589.7   2.49   10.7
ICOL  4.6 % CO
ICOG  4.0 % CO        1972   FTP   7.62  117.5   583.6   3.49   11.2
                      1975   FTP   6.81  120.0   568.7   3.33   11.4
OTHER TESTS:          HOT  START   6.16  127.9   553.3   3.12   11.5
        NONE          HFET         4.60   90.4   407.4   4.34   15.7


126  69 BUIC SPEC 350 COLD TRANS   4.85   71.1   557.1   7.11   13.0
                      COLD  STAB   3.33   59.4   606.4   4.96   12.5
IHCL  2190PPM CARBON  HOT  TRANS   2.55   34.1   505.7   7.71   15.6
IHCG   180PPM HEXANE  HOT   STAB   3.11   56.0   592.7   4.99   12.9
ICOL  2.5 % CO
ICOG  2.0 % CO        1972   FTP   4.07   65.1   582.4   6.01   12.7
                      1975   FTP   3.43   54.8   568.1   6.17   13.3
OTHER TESTS:          HOT  START   2.83   45.3   550.4   6.32   14.1
        NONE          HFET         1.60   15.4   427.1   7.51   19.4


127  69 CHEV BELA 250 COLD TRANS  11.30   55.8   441.6   4.41   15.7
                      COLD  STAB   5.68   36.9   450.0   4.84   16.9
IHCL  9946PPM CARBON  HOT  TRANS   4.19   27.2   405.8   5.51   19.2
IHCG   420PPM HEXANE  HOT   STAB   6.20   36.3   435.0   5.00   17.3
ICOL  3.2 % CO
ICOG  2.8 % CO        1972   FTP   8.52   46.1   445.9   4.63   16.3
                      1975   FTP   6.54   38.2   436.0   4.94   17.2
OTHER TESTS:          HOT  START   5.22   31.9   420.8   5.25   18.2
        NONE          HFET         1.31    5.4   317.5   6.16   26.9


128  69 CHEV CHEV 307 COLD TRANS  15.40  262.2   437.3   1.89    9.9
                      COLD  STAB   5.98   74.0   554.5   4.90   12.9
IHCL  3484PPM CARBON  HOT  TRANS   5.46   80.1   491.4   5.36   14.0
IHCG   325PPM HEXANE  HOT   STAB   5.57   58.4   558.2   5.45   13.3
ICOL  2.8 % CO
ICOG  2.0 % CO        1972   FTP  10.56  165.6   497.5   3.43   11.2
                      1975   FTP   7.81  115.1   512.5   4.40   12.4
OTHER TESTS:          HOT  START   5.51   69.0   525.7   5.40   13.6
        NONE          HFET         4.06   55.1   416.3   5.78   17.2

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN DETROIT

```
                                                                  MPG
VEH                                    -----GRAMS PER MILE-----  FUEL
NO.  YR MAKE MODL CID TEST  TYPE    HC     CO     CO2   NOXC   ECON
-----------------------------------------------------------------------
129  69 CHEV IMPA 327 COLD TRANS 17.54 124.4   553.7  5.47   11.0
                      COLD  STAB 30.08  80.2   567.5  6.75   11.2
IHCL  9946PPM CARBON  HOT  TRANS 19.46  74.4   489.1  6.61   13.3
IHCG  1600PPM HEXANE  HOT   STAB 29.49  79.8   517.5  6.20   12.1
ICOL  4.7 % CO
ICOG  3.4 % CO        1972   FTP 23.98 101.7   560.8  6.13   11.1
                      1975   FTP 24.51  87.8   542.9  6.45   11.7
OTHER TESTS:          HOT  START 24.61  77.2   503.6  6.40   12.6
       NONE           HFET        8.11  44.7   424.6  6.60   17.0


130  69 CHEV MALI 350 COLD TRANS 15.10 161.9   495.9  5.30   11.1
                      COLD  STAB  6.31 112.0   560.0  6.16   11.7
IHCL  6371PPM CARBON  HOT  TRANS  5.27  52.8   541.9  9.27   13.8
IHCG   520PPM HEXANE  HOT   STAB  5.54  91.9   577.0  6.75   12.0
ICOL  5.2 % CO
ICOG  5.4 % CO        1972   FTP 10.59 136.3   528.8  5.74   11.4
                      1975   FTP  7.66 106.0   541.6  6.84   12.1
OTHER TESTS:          HOT  START  5.41  72.9   560.0  7.98   12.8
       LOADED         HFET        2.50  14.4   412.8  7.08   20.0


131  69 CHEV STAR 350 COLD TRANS  5.11  90.2   655.7  9.18   10.9
                      COLD  STAB  4.57  76.3   668.1  9.52   11.1
IHCL  3185PPM CARBON  HOT  TRANS  3.56  39.8   609.9 11.15   13.0
IHCG   345PPM HEXANE  HOT   STAB  4.26  73.7   659.0  9.78   11.3
ICOL  4.9 % CO
ICOG  4.9 % CO        1972   FTP  4.84  83.1   662.1  9.35   11.0
                      1975   FTP  4.41  69.1   649.4  9.90   11.5
OTHER TESTS:          HOT  START  3.92  57.2   635.1 10.45   12.0
       LOADED         HFET        2.12   8.9   501.2 10.22   17.0


132  69 CHEV CAPR 350 COLD TRANS  9.68 160.8   533.5  4.87   10.9
                      COLD  STAB  4.30 119.2   590.3  3.48   11.2
IHCL  3683PPM CARBON  HOT  TRANS  4.17  84.8   525.6  5.67   13.2
IHCG   230PPM HEXANE  HOT   STAB  4.21 111.6   588.3  3.51   11.4
ICOL  5.2 % CO
ICOG  4.3 % CO        1972   FTP  6.92 139.5   562.6  4.16   11.0
                      1975   FTP  5.39 118.4   560.5  4.38   11.6
OTHER TESTS:          HOT  START  4.19  98.6   557.8  4.56   12.2
       NONE           HFET        2.72  60.4   437.8  5.48   16.4

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN DETROIT

```
                                                              MPG
VEH                              -----GRAMS PER MILE-----    FUEL
NO.  YR MAKE MODL CID TEST  TYPE    HC    CO     CO2   NOXC   ECON
------------------------------------------------------------------
133  69 CHRY STAW 383 COLD TRANS 32.16 330.9   564.1   3.78    7.5
                      COLD  STAB  6.39 102.6   699.4   8.54   10.1
IHCL  2389PPM CARBON  HOT  TRANS  5.91 103.1   634.1   7.77   10.9
IHCG   220PPM HEXANE  HOT   STAB  6.00 106.8   686.1   7.79   10.2
ICOL  2.8 % CO
ICOG  2.5 % CO        1972   FTP 18.93 213.7   633.5   6.23    8.6
                      1975   FTP 11.65 150.5   653.0   7.33    9.6
OTHER TESTS:          HOT  START  5.96 105.0   660.8   7.78   10.5
       LOADED         HFET        3.54  65.5   480.4   6.11   14.9


134  69 DODG DART 225 COLD TRANS  5.29  78.3   449.4   7.18   15.1
                      COLD  STAB  3.13  32.9   446.5   7.50   17.5
IHCL  3683PPM CARBON  HOT  TRANS  2.52  25.0   404.0   7.80   19.7
IHCG   330PPM HEXANE  HOT   STAB  2.96  33.3   431.3   6.39   18.0
ICOL  4.1 % CO
ICOG  3.8 % CO        1972   FTP  4.18  55.0   447.9   7.34   16.2
                      1975   FTP  3.41  40.2   435.3   7.52   17.4
OTHER TESTS:          HOT  START  2.75  29.2   418.0   7.07   18.8
       NONE           HFET        1.72  13.0   342.8   6.57   24.1


135  69 FORD FAIR 302 COLD TRANS  6.55  51.9   531.7   8.76   14.0
                      COLD  STAB  5.21  69.4   530.5   6.42   13.5
IHCL  3882PPM CARBON  HOT  TRANS  3.63  39.3   496.5   8.81   15.6
IHCG   320PPM HEXANE  HOT   STAB  4.45  69.4   535.4   6.71   13.5
ICOL  5.2 % CO
ICOG  4.1 % CO        1972   FTP  5.86  60.9   531.1   7.56   13.8
                      1975   FTP  5.05  57.4   521.3   7.57   14.1
OTHER TESTS:          HOT  START  4.05  54.7   516.5   7.74   14.4
       NONE           HFET        1.98  11.7   412.2   7.73   20.3


136  69 FORD FAIR 302 COLD TRANS  5.39  72.7   532.9   7.98   13.4
                      COLD  STAB  4.76  64.2   496.7   6.98   14.5
IHCL  8462PPM CARBON  HOT  TRANS  3.64  31.3   456.2   8.82   17.2
IHCG  1100PPM HEXANE  HOT   STAB  4.28  52.2   496.5   6.67   15.0
ICOL  3.2 % CO
ICOG  2.8 % CO        1972   FTP  5.06  68.3   514.3   7.46   13.9
                      1975   FTP  4.58  56.8   493.0   7.70   14.9
OTHER TESTS:          HOT  START  3.97  42.0   476.9   7.72   16.0
       LOADED         HFET        2.25   8.6   385.1   7.92   21.9

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C.CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS ON INDIVIDUAL VEHICLES IN DETROIT

```
                                                                    MPG
VEH                                      -----GRAMS PER MILE-----   FUEL
NO.  YR MAKE MODL CID TEST  TYPE     HC     CO     CO2    NOXC    ECON
-----------------------------------------------------------------------
137  69 FORD MUST 351 COLD TRANS   5.38   62.0   580.8   6.39    12.8
                      COLD  STAB   3.72   48.0   570.2   5.24    13.5
IHCL  2389PPM CARBON  HOT  TRANS   3.31   29.1   520.0   7.01    15.4
IHCG   255PPM HEXANE  HOT   STAB   3.55   45.8   559.3   5.31    13.8
ICOL  3.2 % CO
ICOG  2.9 % CO        1972   FTP   4.53   54.8   575.4   5.80    13.1
                      1975   FTP   3.96   45.7   558.5   5.97    13.8
OTHER TESTS:          HOT  START   3.43   37.7   540.2   6.14    14.5
        NONE          HFET         2.15   16.9   429.2   5.94    19.2


138  69 FORD MUST 351 COLD TRANS   5.67   50.6   614.6   6.83    12.5
                      COLD  STAB   4.83   71.0   579.5   3.47    12.6
IHCL  5455PPM CARBON  HOT  TRANS   3.97   35.8   528.9   6.69    14.8
IHCG   415PPM HEXANE  HOT   STAB   4.77   69.6   561.0   3.83    12.9
ICOL  5.2 % CO
ICOG  5.7 % CO        1972   FTP   5.24   61.1   596.6   5.10    12.5
                      1975   FTP   4.77   57.0   572.8   5.07    13.1
OTHER TESTS:          HOT  START   4.38   53.2   545.4   5.22    13.8
        LOADED        HFET         2.23   11.3   468.5   6.73    18.0


139  69 FORD GALA 390 COLD TRANS   5.46   79.3   708.7   8.48    10.4
                      COLD  STAB   4.98   89.8   635.6   6.41    11.2
IHCL  5296PPM CARBON  HOT  TRANS   4.06   51.4   569.3   8.56    13.0
IHCG   445PPM HEXANE  HOT   STAB   4.91   92.5   613.2   5.90    11.5
ICOL  5.2 % CO
ICOG  7.5 % CO        1972   FTP   5.21   84.7   671.1   7.42    10.8
                      1975   FTP   4.82   77.0   638.0   7.44    11.5
OTHER TESTS:          HOT  START   4.50   72.5   601.6   7.19    12.2
        A/C           HFET         2.44   23.0   504.8   7.75    16.2


140  69 MERC MONT 390 COLD TRANS   6.34  106.1   643.6   6.57    10.7
                      COLD  STAB   5.20   68.8   697.4   6.80    10.8
IHCL  1792PPM CARBON  HOT  TRANS   4.52   46.8   627.5   8.87    12.4
IHCG   210PPM HEXANE  HOT   STAB   5.19   73.5   697.4   6.40    10.7
ICOL  1.3 % CO
ICOG  2.2 % CO        1972   FTP   5.76   86.9   671.2   6.69    10.7
                      1975   FTP   5.25   70.5   666.8   7.33    11.2
OTHER TESTS:          HOT  START   4.87   60.5   663.4   7.60    11.5
        A/C           HFET         3.34   32.6   492.2   8.06    16.0

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN DETROIT

```
                                                                 MPG
VEH                                   -----GRAMS PER MILE-----  FUEL
NO.  YR MAKE MODL CID TEST  TYPE    HC     CO     CO2    NOXC   ECON
--------------------------------------------------------------------
141  69 OLDS 98   455 COLD TRANS   4.15   44.1   803.4   6.47   10.0
                      COLD  STAB   2.93   34.3   728.2   5.85   11.2
IHCL  2190PPM CARBON  HOT  TRANS   2.29   19.6   654.7   7.76   12.8
IHCG   210PPM HEXANE  HOT   STAB   2.55   22.3   718.9   5.95   11.6
ICOL  1.6 % CO
ICOG  1.5 % CO        1972   FTP   3.53   39.1   764.8   6.15   10.6
                      1975   FTP   3.01   32.3   723.6   6.51   11.3
OTHER TESTS:          HOT  START   2.42   21.0   687.7   6.83   12.2
           NONE       HFET         1.36    7.2   529.1  10.39   16.3


142  69 PLYM FURY 318 COLD TRANS   8.06   21.6   402.1   6.34   19.2
                      COLD  STAB   8.61   22.9   378.7   5.26   20.1
IHCL  9946PPM CARBON  HOT  TRANS   6.19   13.3   347.7   7.27   22.9
IHCG  1000PPM HEXANE  HOT   STAB   7.65   22.0   380.3   5.18   20.2
ICOL  5.2 % CO
ICOG  7.4 % CO        1972   FTP   8.34   22.3   390.1   5.79   19.7
                      1975   FTP   7.82   20.0   375.0   6.05   20.6
OTHER TESTS:          HOT  START   6.94   17.8   364.4   6.19   21.4
           LOADED     HFET         2.74    6.1   307.3   8.20   27.3


143  69 PONT TEMP 350 COLD TRANS   7.42  135.0   597.1   5.63   10.7
                      COLD  STAB   7.94  181.1   581.4   3.58   10.0
IHCL  9946PPM CARBON  HOT  TRANS   6.29  115.5   505.4   5.11   12.6
IHCG   865PPM HEXANE  HOT   STAB   8.34  193.6   528.9   3.13   10.3
ICOL  5.2 % CO
ICOG  6.4 % CO        1972   FTP   7.69  158.7   589.0   4.58   10.3
                      1975   FTP   7.37  153.3   563.6   4.44   10.7
OTHER TESTS:          HOT  START   7.34  155.6   517.5   4.10   11.3
           NONE       HFET         4.09   77.2   400.2   4.40   16.6


144  69 PONT CATA 400 COLD TRANS   4.44   63.8   686.1   7.40   11.1
                      COLD  STAB   3.88   41.2   653.0   6.76   12.2
IHCL  2050PPM CARBON  HOT  TRANS   3.17   29.3   588.7   8.38   13.8
IHCG   255PPM HEXANE  HOT   STAB   3.73   36.2   646.4   6.65   12.4
ICOL  0.8 % CO
ICOG  1.6 % CO        1972   FTP   4.15   52.2   669.1   7.07   11.6
                      1975   FTP   3.80   42.6   642.1   7.34   12.5
OTHER TESTS:          HOT  START   3.46   32.8   619.0   7.49   13.0
           A/C        HFET         1.96   11.7   496.5   9.38   17.0

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

```
                LISTING OF FEDERAL TEST PROCEDURE RESULTS
                   ON INDIVIDUAL VEHICLES IN DETROIT

                                                                  MPG
VEH                                   -----GRAMS PER MILE-----   FUEL
NO.  YR MAKE MODL CID TEST  TYPE    HC     CO     CO2    NOXC   ECON
----------------------------------------------------------------------
145  69 VOLK SEDA  91 COLD TRANS   5.55   72.4   313.7   4.39   19.9
                      COLD  STAB   5.98   55.4   330.5   3.29   20.3
IHCL  5177PPM CARBON  HOT  TRANS   4.53   51.5   290.0   4.12   23.0
IHCG   415PPM HEXANE  HOT   STAB   5.78   55.4   342.4   3.59   19.8
ICOL  3.9 % CO
ICOG  3.3 % CO        1972   FTP   5.77   63.7   322.3   3.83   20.1
                      1975   FTP   5.49   57.9   315.8   3.75   20.9
OTHER TESTS:          HOT  START   5.17   53.5   316.9   3.85   21.3
       NONE           HFET         1.81   25.3   247.4   4.30   30.3


146  68 AMMO JAVL 232 COLD TRANS   3.67   37.6   501.8   7.85   15.5
                      COLD  STAB   3.08   18.1   503.6   8.18   16.4
IHCL  1752PPM CARBON  HOT  TRANS   2.62   19.3   444.3   8.34   18.4
IHCG   180PPM HEXANE  HOT   STAB   2.79   16.1   488.4   7.94   17.0
ICOL  0.9 % CO
ICOG  0.9 % CO        1972   FTP   3.47   27.6   502.7   8.02   15.9
                      1975   FTP   3.12   22.5   486.8   8.16   16.7
OTHER TESTS:          HOT  START   2.71   17.7   466.9   8.13   17.6
       NONE           HFET         1.68    8.1   380.7   8.28   22.3


147  68 BUIC ELEC 430 COLD TRANS   7.31  102.4   576.6   6.19   11.7
                      COLD  STAB   6.88  125.1   610.0   4.90   10.7
IHCL  4081PPM CARBON  HOT  TRANS   5.48   83.0   598.3   8.34   11.9
IHCG   330PPM HEXANE  HOT   STAB   6.87  126.3   597.7   4.86   10.9
ICOL  4.0 % CO
ICOG  4.0 % CO        1972   FTP   7.09  114.0   593.8   5.52   11.2
                      1975   FTP   6.58  108.7   599.8   6.12   11.2
OTHER TESTS:          HOT  START   6.19  105.2   598.0   6.55   11.3
       LOADED         HFET         2.88   31.3   510.9   9.43   15.6


148  68 CADI DEVI 472 COLD TRANS   5.01   40.7   821.0  10.76    9.9
                      COLD  STAB   5.14   50.9   748.6   8.14   10.5
IHCL  1264PPM CARBON  HOT  TRANS   4.88   37.9   700.8  10.15   11.4
IHCG   105PPM HEXANE  HOT   STAB   6.38   48.8   752.2   8.55   10.5
ICOL  2.1 % CO
ICOG  1.7 % CO        1972   FTP   5.08   45.9   783.8   9.41   10.2
                      1975   FTP   5.04   45.1   750.5   9.25   10.6
OTHER TESTS:          HOT  START   5.65   43.5   727.2   9.33   10.9
       NONE           HFET         2.18   31.9   575.7   8.09   14.0

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

LISTING OF FEDERAL TEST PROCEDURE RESULTS ON INDIVIDUAL VEHICLES IN DETROIT

```
                                                                    MPG
VEH                                  -----GRAMS PER MILE-----      FUEL
NO.  YR MAKE MODL CID TEST   TYPE    HC     CO     CO2   NOXC      ECON
------------------------------------------------------------------------
149  68 CHEV MALI 230 COLD  TRANS  10.68  101.2  479.0   5.88      13.2
                      COLD   STAB   3.73   43.7  566.7   5.95      13.7
IHCL  1592PPM CARBON  HOT   TRANS   3.21   23.1  621.4   8.84      13.3
IHCG   160PPM HEXANE  HOT    STAB   6.15   48.7  627.3   7.86      12.3
ICOL  0.1 % CO
ICOG  0.1 % CO        1972    FTP   7.11   71.7  524.0   5.91      13.5
                      1975    FTP   5.04   50.0  565.6   6.73      13.5
OTHER TESTS:          HOT   START   4.72   36.2  624.5   8.33      12.7
        NONE          HFET          1.58   15.3  371.6   6.83      22.2


150  68 CHEV IMPA 307 COLD  TRANS   8.32  124.7  591.9   5.47      10.9
                      COLD   STAB   6.11   64.6  575.0   6.06      12.8
IHCL  6770PPM CARBON  HOT   TRANS   5.17   70.6  547.0   6.53      13.2
IHCG   785PPM HEXANE  HOT    STAB   5.80   67.7  560.7   5.93      12.9
ICOL  5.2 % CO
ICOG  7.6 % CO        1972    FTP   7.19   93.8  583.2   5.77      11.8
                      1975    FTP   6.31   78.8  570.9   6.07      12.4
OTHER TESTS:          HOT   START   5.49   69.1  554.1   6.22      13.1
        LOADED        HFET          2.82   25.6  471.8   6.60      17.0


151  68 CHEV IMPA 327 COLD  TRANS  76.28  330.1  461.8   1.01       7.3
                      COLD   STAB  77.79  229.2  505.1   1.33       8.0
IHCL  9946PPM CARBON  HOT   TRANS  55.43  132.5  444.1   2.25      10.7
IHCG  2000PPM HEXANE  HOT    STAB  71.78  162.5  548.1   2.31       8.6
ICOL  0.1 % CO
ICOG  0.2 % CO        1972    FTP  77.05  278.3  484.0   1.17       7.6
                      1975    FTP  71.27  223.5  479.1   1.52       8.4
OTHER TESTS:          HOT   START  63.82  147.9  497.5   2.28       9.5
        LOADED        HFET         45.03   74.5  426.6   2.90      12.9


152  68 CHEV MALI 327 COLD  TRANS   6.52   83.2  574.6   3.22      12.2
                      COLD   STAB   4.65   61.7  553.4   2.15      13.3
IHCL  1443PPM CARBON  HOT   TRANS   4.03   44.9  477.9   3.06      15.8
IHCG   160PPM HEXANE  HOT    STAB   4.59   66.1  549.0   2.08      13.3
ICOL  0.9 % CO
ICOG  0.8 % CO        1972    FTP   5.56   72.2  563.7   2.67      12.8
                      1975    FTP   4.87   61.5  536.9   2.63      13.7
OTHER TESTS:          HOT   START   4.32   55.8  514.4   2.56      14.4
        NONE          HFET          2.88   34.5  369.1   2.81      20.5

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS ON INDIVIDUAL VEHICLES IN DETROIT

```
                                                                        MPG
VEH                                        -----GRAMS PER MILE-----    FUEL
NO.  YR MAKE MODL CID TEST  TYPE     HC     CO     CO2    NOXC    ECON
-----------------------------------------------------------------------
153  68 CHEV MALI 327 COLD  TRANS   9.31  162.5   496.2   3.00    11.4
                      COLD   STAB   8.96  165.1   512.1   1.89    11.1
IHCL  6670PPM CARBON  HOT   TRANS   7.12  111.8   459.4   3.33    13.5
IHCG   495PPM HEXANE  HOT    STAB   8.47  160.0   497.0   1.80    11.4
ICOL  5.2 % CO
ICOG  4.1 % CO        1972    FTP   9.13  163.8   504.4   2.43    11.2
                      1975    FTP   8.52  149.8   494.2   2.52    11.7
OTHER TESTS:          HOT   START   7.82  136.5   478.7   2.54    12.4
        NONE          HFET          3.81   71.5   387.7   3.97    17.3


154  68 DODG POLA 383 COLD  TRANS  25.54  375.7   496.1   2.24     7.6
                      COLD   STAB   8.45  140.5   609.8   6.48    10.4
IHCL  7566PPM CARBON  HOT   TRANS   6.12   85.2   577.8   9.19    12.1
IHCG   440PPM HEXANE  HOT    STAB   8.21  145.8   584.7   5.66    10.6
ICOL  5.2 % CO
ICOG  6.5 % CO        1972    FTP  16.77  255.0   554.5   4.42     8.8
                      1975    FTP  11.38  174.4   577.1   6.35    10.0
OTHER TESTS:          HOT   START   7.20  116.3   581.3   7.38    11.3
        LOADED        HFET          3.49   37.3   505.7   9.16    15.4


155  68 FORD FAIR 200 COLD  TRANS   7.03  128.2   448.7   6.52    13.2
                      COLD   STAB   4.07   31.4   541.7  11.05    14.7
IHCL  3484PPM CARBON  HOT   TRANS   3.34   24.1   471.1  11.77    17.1
IHCG   600PPM HEXANE  HOT    STAB   3.72   33.8   528.5  10.09    15.0
ICOL  1.4 % CO
ICOG  2.2 % CO        1972    FTP   5.51   78.5   496.4   8.85    13.9
                      1975    FTP   4.48   49.6   502.6  10.30    14.9
OTHER TESTS:          HOT   START   3.53   29.1   500.6  10.91    15.9
        NONE          HFET          2.26   13.5   413.6  13.42    20.1


156  68 FORD MUST 289 COLD  TRANS   6.48   56.6   542.8   8.98    13.6
                      COLD   STAB   7.34   83.8   504.7   6.59    13.5
IHCL  9946PPM CARBON  HOT   TRANS   4.90   41.6   468.8   9.41    16.1
IHCG   590PPM HEXANE  HOT    STAB   6.61   82.7   491.9   6.99    13.8
ICOL  5.2 % CO
ICOG  6.5 % CO        1972    FTP   6.92   70.6   523.2   7.75    13.5
                      1975    FTP   6.48   66.4   502.7   7.87    14.1
OTHER TESTS:          HOT   START   5.78   62.7   480.7   8.17    14.9
        NONE          HFET          2.30    8.9   410.2   9.40    20.6

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN DETROIT

```
                                                                    MPG
VEH                                   -----GRAMS PER MILE-----     FUEL
NO.   YR MAKE MODL CID TEST   TYPE     HC     CO     CO2    NOXC   ECON
-----------------------------------------------------------------------
157   68 FORD GALA 302 COLD TRANS    5.78   74.4   598.9   7.21   12.1
                       COLD  STAB    3.34   51.9   633.4   5.65   12.2
THCL  1264PPM CARBON   HOT  TRANS    3.54   59.9   544.2   6.45   13.7
THCG   115PPM HEXANE   HOT   STAB    3.26   54.1   628.9   5.66   12.3
ICOL  1.0 % CO
ICOG  0.9 % CO         1972   FTP    4.53   62.8   616.6   6.41   12.2
                       1975   FTP    3.91   58.8   601.4   6.20   12.6
OTHER TESTS:           HOT  START    3.40   57.0   587.7   6.05   12.9
         NONE          HFET          2.07   21.3   411.8   6.56   19.6


158   68 FORD TORI 390 COLD TRANS    4.99   46.9   644.4   6.08   12.1
                       COLD  STAB    4.98   71.5   583.0   4.07   12.5
IHCL  3385PPM CARBON   HOT  TRANS    4.02   44.1   534.5   5.77   14.4
IHCG   430PPM HEXANE   HOT   STAB    5.03   67.6   565.4   3.96   12.9
ICOL  2.5 % CO
ICOG  2.6 % CO         1972   FTP    4.98   59.5   612.9   5.05   12.3
                       1975   FTP    4.72   58.7   582.4   4.96   12.9
OTHER TESTS:           HOT  START    4.54   56.2   550.4   4.84   13.6
        LOADED         HFET          2.99   32.3   460.4   5.31   17.0


159   68 MERC COUG 302 COLD TRANS    4.83   58.1   534.2   7.67   13.8
                       COLD  STAB    3.60   51.5   604.6   7.49   12.7
IHCL  4480PPM CARBON   HOT  TRANS    3.60   24.6   523.7   9.09   15.5
IHCG   320PPM HEXANE   HOT   STAB    3.55   46.4   587.7   7.64   13.2
ICOL  5.2 % CO
ICOG  4.2 % CO         1972   FTP    4.20   54.7   570.4   7.58   13.3
                       1975   FTP    3.86   45.4   567.4   7.97   13.6
OTHER TESTS:           HOT  START    3.57   35.8   556.5   8.34   14.2
        LOADED         HFET          1.67    7.4   439.1   7.79   19.4


160   68 OLDS CUTL 350 COLD TRANS    7.40   95.3   610.3   6.79   11.3
                       COLD  STAB    7.76   59.2   630.1   7.03   11.9
IHCL  5177PPM CARBON   HOT  TRANS    5.58   37.1   570.4   7.93   13.7
IHCG   650PPM HEXANE   HOT   STAB    7.39   65.6   632.8   6.59   11.7
ICOL  4.8 % CO
ICOG  3.6 % CO         1972   FTP    7.59   76.8   620.4   6.92   11.6
                       1975   FTP    7.08   60.6   609.4   7.23   12.2
OTHER TESTS:           HOT  START    6.51   51.7   602.4   7.24   12.6
         NONE          HFET          2.66   28.2   458.2   6.70   17.4

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS ON INDIVIDUAL VEHICLES IN DETROIT

```
VEH                                                                   MPG
NO.   YR MAKE MODL CID TEST   TYPE    -----GRAMS PER MILE-----       FUEL
                                       HC      CO     CO2    NOXC    ECON
-------------------------------------------------------------------------
161   68 PLYM BELV 318 COLD  TRANS   4.70    39.4   589.1  10.22    13.3
                       COLD   STAB   4.06    21.0   629.0  12.15    13.1
IHCL  1344PPM CARBON   HOT   TRANS   3.14    10.7   568.7  12.47    14.9
IHCG   200PPM HEXANE   HOT    STAB   3.94    15.3   637.2  13.11    13.2
ICOL  0.3 % CO
ICOG  0.9 % CO         1972    FTP   4.37    30.0   609.6  11.21    13.2
                       1975    FTP   3.94    22.0   604.0  11.83    13.6
OTHER TESTS:           HOT   START   3.55    13.1   603.9  12.80    14.0
        NONE           HFET          2.06     6.0   424.7  12.80    20.1


162   68 PONT BONN 400 COLD  TRANS   6.49    37.3   680.0   7.57    11.7
                       COLD   STAB   8.08    35.1   644.3   7.31    12.2
IHCL  9946PPM CARBON   HOT   TRANS   5.32    22.7   578.3   8.96    14.1
IHCG  1100PPM HEXANE   HOT    STAB   8.44    30.8   631.5   7.91    12.6
ICOL  2.9 % CO
ICOG  2.4 % CO         1972    FTP   7.30    36.2   661.7   7.44    12.0
                       1975    FTP   6.98    32.1   633.4   7.82    12.6
OTHER TESTS:           HOT   START   6.92    26.9   605.6   8.42    13.3
        NONE           HFET          2.08     6.4   482.7   9.02    17.8


163   68 VOLK SEDA  91 COLD  TRANS   6.17    59.1   295.3   2.60    21.8
                       COLD   STAB   6.31    51.6   353.5   2.05    19.5
IHCL  1595PPM CARBON   HOT   TRANS   4.33    46.1   301.1   3.04    22.9
IHCG    75PPM HEXANE   HOT    STAB   6.21    53.1   377.3   2.62    18.5
ICOL  2.2 % CO
ICOG  1.0 % CO         1972    FTP   6.24    55.3   325.2   2.32    20.6
                       1975    FTP   5.73    51.7   326.8   2.44    20.8
OTHER TESTS:           HOT   START   5.30    49.7   340.2   2.82    20.4
        NONE           HFET          2.05    26.1   234.7   2.90    31.4


164   67 AMMO AMBA 232 COLD  TRANS   6.61   105.1   583.8   9.29    11.5
                       COLD   STAB   4.23    96.4   523.1   6.36    12.9
IHCL  6172PPM CARBON   HOT   TRANS   3.49    76.7   516.2   8.70    13.7
IHCG   435PPM HEXANE   HOT    STAB   4.39    99.0   513.0   6.06    13.0
ICOL  5.2 % CO
ICOG  5.2 % CO         1972    FTP   5.39   100.6   552.6   7.79    12.2
                       1975    FTP   4.52    92.8   533.9   7.62    12.8
OTHER TESTS:           HOT   START   3.95    88.2   514.5   7.34    13.3
        NONE           HFET          2.42    37.6   481.7  11.80    16.2

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN DETROIT

```
                                                                  MPG
VEH                                    -----GRAMS PER MILE-----  FUEL
NO.  YR MAKE MODL CID TEST  TYPE    HC     CO     CO2    NOXC   ECON
----------------------------------------------------------------------
165  67 BUIC LESA 340 COLD TRANS 10.74 152.1   555.6   4.94   10.7
                      COLD  STAB 12.08 157.3   474.9   2.26   11.7
IHCL  9946PPM CARBON  HOT  TRANS  8.80 124.4   463.2   4.12   12.9
IHCG  1580PPM HEXANE  HOT   STAB 11.17 160.4   463.7   1.98   11.8
ICOL  5.2 % CO
ICOG  6.9 % CO        1972   FTP 11.43 154.8   514.2   3.56   11.2
                      1975   FTP 10.89 147.1   488.5   3.34   11.8
OTHER TESTS:          HOT  START 10.02 142.9   463.5   3.02   12.3
        LOADED        HFET        4.47  95.8   387.1   4.01   16.1


166  67 CADI DEVI 429 COLD TRANS  7.83 143.5   661.2   5.23    9.7
                      COLD  STAB  7.37 141.4   578.9   2.86   10.9
IHCL  2688PPM CARBON  HOT  TRANS  4.84  91.0   525.3   4.54   13.0
IHCG   300PPM HEXANE  HOT   STAB  6.70 143.1   627.7   3.33   10.2
ICOL  2.9 % CO
ICOG  2.6 % CO        1972   FTP  7.59 142.4   619.0   4.01   10.2
                      1975   FTP  6.76 127.9   581.3   3.82   11.0
OTHER TESTS:          HOT  START  5.79 117.8   577.8   3.92   11.4
        LOADED        HFET        3.61  52.1   504.6   6.29   14.8


167  67 CHEV CAMA 250 COLD TRANS  9.51 129.0   413.9   5.20   13.7
                      COLD  STAB 12.30  84.7   403.9   5.17   15.4
IHCL  9946PPM CARBON  HOT  TRANS  7.07  68.7   373.3   6.03   17.6
IHCG  1800PPM HEXANE  HOT   STAB 13.80  88.0   389.6   4.95   15.5
ICOL  5.2 % CO
ICOG  6.4 % CO        1972   FTP 10.94 106.3   408.8   5.18   14.5
                      1975   FTP 10.27  89.5   397.5   5.41   15.5
OTHER TESTS:          HOT  START 10.52  78.6   381.7   5.48   16.5
        NONE          HFET        2.76  29.9   323.6   6.01   23.4


168  67 CHEV IMPA 283 COLD TRANS 13.70 134.8   570.3   5.80   10.8
                      COLD  STAB 10.41 121.1   542.8   4.23   11.6
IHCL  9458PPM CARBON  HOT  TRANS  8.38  99.5   521.6   5.50   12.6
IHCG   600PPM HEXANE  HOT   STAB 10.61 124.3   557.1   4.37   11.3
ICOL  5.2 % CO
ICOG  4.6 % CO        1972   FTP 12.01 127.8   556.2   4.99   11.2
                      1975   FTP 10.54 118.0   542.7   4.91   11.7
OTHER TESTS:          HOT  START  9.53 112.3   539.9   4.92   11.9
        NONE          HFET        5.67  77.5   443.0   5.60   15.2

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN DETROIT

```
                                                                 MPG
VEH                                    -----GRAMS PER MILE-----  FUEL
NO.  YR MAKE MODL CID TEST  TYPE    HC     CO      CO2    NOXC   ECON
-----------------------------------------------------------------------
169  67 CHEV IMPA 283 COLD TRANS  9.63  117.3   568.4   4.49   11.3
                      COLD  STAB  8.55  116.7   526.1   2.93   12.0
IHCL  8661PPM CARBON  HOT  TRANS  6.75   95.6   480.9   4.01   13.6
IHCG   515PPM HEXANE  HOT   STAB  8.28  116.0   503.2   2.70   12.5
ICOL  5.2 % CO
ICOG  4.8 % CO        1972   FTP  9.08  117.0   546.7   3.69   11.7
                      1975   FTP  8.28  111.0   522.4   3.55   12.3
OTHER TESTS:          HOT  START  7.53  106.1   492.3   3.34   13.0
       LOADED         HFET        4.24   64.0   409.6   4.48   16.9


170  67 CHEV STAW 327 COLD TRANS 16.16  107.0   583.6   5.72   11.1
                      COLD  STAB 24.89  130.6   495.9   3.09   11.4
IHCL  9946PPM CARBON  HOT  TRANS 13.55   94.9   507.7   5.18   12.7
IHCG  2200PPM HEXANE  HOT   STAB 22.36  130.8   493.1   3.12   11.5
ICOL  5.2 % CO
ICOG  8.8 % CO        1972   FTP 20.64  119.1   538.6   4.37   11.2
                      1975   FTP 19.92  115.8   517.5   4.22   11.6
OTHER TESTS:          HOT  START 18.07  113.3   500.2   4.13   12.1
       LOADED         HFET        6.51   64.1   462.4   5.14   15.2


171  67 CHRY NEWP 383 COLD TRANS 14.59  352.4   604.3   1.23    7.4
                      COLD  STAB  6.01  167.1   666.4   1.38    9.4
IHCL  2488PPM CARBON  HOT  TRANS  4.47  102.0   633.1   3.33   11.0
IHCG   345PPM HEXANE  HOT   STAB  4.03   74.8   707.3   2.70   10.6
ICOL  0.3 % CO
ICOG  0.4 % CO        1972   FTP 10.19  257.3   636.2   1.31    8.3
                      1975   FTP  7.38  187.8   644.2   1.89    9.2
OTHER TESTS:          HOT  START  4.25   88.0   671.2   3.01   10.8
       LOADED         HFET        2.36   59.3   511.6   3.47   14.5


172  67 DODG MONA 383 COLD TRANS 13.40  133.0   627.1   5.74   10.1
                      COLD  STAB  6.03   69.8   626.1   6.43   11.8
IHCL  9946PPM CARBON  HOT  TRANS  5.23   53.5   565.5   6.65   13.3
IHCG   680PPM HEXANE  HOT   STAB  5.87   62.1   609.2   5.94   12.2
ICOL  5.2 % CO
ICOG  4.6 % CO        1972   FTP  9.62  100.6   626.6   6.09   10.9
                      1975   FTP  7.35   78.5   609.5   6.35   11.7
OTHER TESTS:          HOT  START  5.56   57.9   587.9   6.29   12.7
       NONE           HFET        2.76   28.2   471.3   6.35   16.9

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN DETROIT

```
                                                                    MPG
VEH                                    -----GRAMS PER MILE-----    FUEL
NO.  YR MAKE MODL CID TEST   TYPE    HC     CO     CO2    NOXC    ECON
------------------------------------------------------------------------
173  67 FORD GALA 289 COLD  TRANS  12.54  230.4   480.5   1.82    10.1
                      COLD   STAB  11.32  300.7   456.3   0.94     9.2
IHCL  6371PPM CARBON  HOT   TRANS  10.19  218.1   415.3   1.39    11.2
IHCG   400PPM HEXANE  HOT    STAB  10.27  270.2   446.8   0.86     9.8
ICOL  5.2 % CO
ICOG  6.2 % CO        1972    FTP  11.92  266.5   468.1   1.37     9.6
                      1975    FTP  11.26  263.1   450.0   1.25     9.9
OTHER TESTS:          HOT   START  10.23  244.9   431.5   1.12    10.5
        NONE          HFET          5.56  127.4   356.0   2.09    15.5


174  67 FORD GALA 289 COLD  TRANS   7.78   93.7   477.0   7.07    13.7
                      COLD   STAB   6.60  171.8   538.3   4.36    10.7
IHCL  4977PPM CARBON  HOT   TRANS   6.15  113.6   459.5   5.49    13.5
IHCG   400PPM HEXANE  HOT    STAB   6.41  175.0   567.2   4.90    10.3
ICOL  5.2 % CO
ICOG  6.6 % CO        1972    FTP   7.18  133.8   508.5   5.68    12.0
                      1975    FTP   6.73  139.3   503.6   5.24    11.9
OTHER TESTS:          HOT   START   6.29  145.2   514.8   5.19    11.6
        LOADED        HFET          3.22   64.3   385.7   5.67    17.9


175  67 FORD GALA 390 COLD  TRANS   5.51   61.2   711.5   6.95    10.8
                      COLD   STAB   3.47   62.6   717.2   3.63    10.7
IHCL  2538PPM CARBON  HOT   TRANS   4.22   51.7   629.0   6.30    12.3
IHCG   235PPM HEXANE  HOT    STAB   3.42   62.1   735.5   3.99    10.5
ICOL  3.2 % CO
ICOG  2.4 % CO        1972    FTP   4.46   61.9   714.4   5.24    10.7
                      1975    FTP   4.10   59.3   641.6   5.06    11.1
OTHER TESTS:          HOT   START   3.81   57.1   683.7   5.11    11.3
        NONE          HFET          2.51   46.0   489.9   5.20    15.6


176  67 MERC MONT 390 COLD  TRANS  14.03   85.3   774.1   7.24     9.3
                      COLD   STAB  15.19   83.2   666.4   7.44    10.5
IHCL  9946PPM CARBON  HOT   TRANS  10.03   62.6   631.6   7.76    11.7
IHCG  1680PPM HEXANE  HOT    STAB  14.19   77.1   669.6   7.52    10.6
ICOL  3.1 % CO
ICOG  3.5 % CO        1972    FTP  14.62   84.2   718.8   7.34     9.9
                      1975    FTP  13.51   77.9   679.3   7.49    10.5
OTHER TESTS:          HOT   START  12.17   70.0   651.1   7.63    11.1
        NONE          HFET          5.49   39.9   535.3   7.20    14.4

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

APPENDIX C,CONT'D

LISTING OF FEDERAL TEST PROCEDURE RESULTS
ON INDIVIDUAL VEHICLES IN DETROIT

```
VEH                                                                      MPG
NO.  YR MAKE MODL CID TEST  TYPE    -----GRAMS PER MILE-----           FUEL
                                      HC      CO      CO2     NOXC     ECON
--------------------------------------------------------------------------------
177  67 OLDS CUTL 330 COLD TRANS  15.90  226.2   544.2   2.83      9.3
                      COLD  STAB   7.33  150.3   556.6   1.98     10.9
IHCL  8462PPM CARBON  HOT  TRANS   5.47  109.8   496.5   3.44     12.9
IHCG   515PPM HEXANE  HOT   STAB   7.11  150.6   534.4   1.73     11.2
ICOL  5.2 % CO
ICOG  5.5 % CO        1972   FTP  11.50  187.2   550.6   2.39     10.1
                      1975   FTP   8.61  154.9   537.3   2.56     11.0
OTHER TESTS:          HOT  START   6.31  130.7   516.0   2.56     12.0
      NONE            HFET         4.58  124.5   389.9   2.10     14.8

178  67 PLYM BARR 225 COLD TRANS  31.91  151.1   379.0   2.91     12.4
                      COLD  STAB  20.33  114.4   375.2   3.21     14.3
IHCL  9946PPM CARBON  HOT  TRANS  20.65  108.0   340.0   3.05     15.4
IHCG  2000PPM HEXANE  HOT   STAB  24.43  131.8   353.3   2.56     13.9
ICOL  3.7 % CO
ICOG  4.2 % CO        1972   FTP  25.97  132.2   377.1   3.07     13.3
                      1975   FTP  22.84  120.3   366.2   3.10     14.1
OTHER TESTS:          HOT  START  22.59  120.2   346.8   2.80     14.6
      NONE            HFET        13.57   57.2   313.6   4.27     19.9

179  67 PONT VENT 400 COLD TRANS  25.96  162.5   586.8   6.63      9.6
                      COLD  STAB   5.19   78.1   635.4   6.93     11.5
IHCL  4480PPM CARBON  HOT  TRANS   3.89   46.7   551.1   8.78     13.9
IHCG   365PPM HEXANE  HOT   STAB   5.12   74.7   627.9   7.64     11.7
ICOL  3.7 % CO
ICOG  3.1 % CO        1972   FTP  15.30  119.2   611.7   6.78     10.5
                      1975   FTP   9.18   87.1   601.8   7.38     11.6
OTHER TESTS:          HOT  START   4.52   61.1   590.5   8.20     12.7
      NONE            HFET         2.13   27.2   428.7   8.89     18.6

180  67 VOLK SEDA  91 COLD TRANS   6.43   75.7   335.5   7.65     18.7
                      COLD  STAB   7.35   75.2   319.4   4.14     19.3
IHCL  9946PPM CARBON  HOT  TRANS   4.14   53.3   275.9   5.11     23.8
IHCG  2000PPM HEXANE  HOT   STAB   6.76   73.3   313.5   3.73     19.7
ICOL  5.2 % CO
ICOG  5.8 % CO        1972   FTP   6.90   75.5   327.2   5.85     19.0
                      1975   FTP   6.27   69.3   310.7   5.14     20.2
OTHER TESTS:          HOT  START   5.48   63.6   295.2   4.40     21.5
      NONE            HFET         1.72   34.1   225.1   4.52     31.2

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO
```

Appendix D - Listing of Modal Results on Individual Vehicles

Legend

VEH - Vehicle Number

YEAR - Model Year

MAKE - Vehicle Make

MODL - Vehicle Model

CID - Engine Displacement in Cubic Inches

MODE NO. - Lists the Individual Modes of the Test
1 through 32 - Modes of the Surveillance Driving Sequence (SDS), listed on the following page
SUM - A composite of the SDS and the Steady State results
BAG - Results of the entire SDS as measured using the CVS.
33 - Idle mode
34 - 5 MPH Steady State
35 - 10 MPH Steady State
36 - 15 MPH Steady State
37 - 30 MPH Steady State
38 - 45 MPH Steady State
39 - 60 MPH Steady State

HC - Hydrocarbon Emissions in grams per mile

CO - Carbon Monoxide Emissions in grams per mile

CO2 - Carbon Dioxide Emissions in grams per mile

NOX - Oxides of Nitrogen Emissions in grams per mile

MPG - Fuel Economy in miles per gallon, Calculated Using the Carbon Balance Method.

SURVEILLANCE DRIVING SEQUENCE

Mode						
No	Type	Speed Range (mph)	Time in Mode (sec)	Average Speed (mph)	Average Acceleration Rate (mph/sec)	Distance (miles)
1	Accel	0-30	12	18.05	2.50	0.0602
2	Decel	30-0	16	16.66	-1.88	0.0741
3	Accel	0-15	8	9.04	1.88	0.0201
4	Accel	15-30	11	23.07	1.36	0.0705
5	Accel	30-45	13	37.65	1.15	0.1360
6	Decel	45-30	12	38.05	-1.25	0.1268
7	Accel	30-60	17	45.80	1.76	0.2163
8	Decel	60-45	12	51.48	-1.25	0.1716
9	Accel	45-60	14	52.54	1.07	0.2043
10	Decel	60-15	30	40.40	-1.50	0.3367
11	Accel	15-60	26	43.42	1.73	0.3136
12	Decel	60-0	21	33.83	-2.86	0.1973
13	Accel	0-60	32	37.27	1.88	0.3313
14	Decel	60-30	23	46.86	-1.30	0.2994
15	Decel	30-15	9	23.18	-1.67	0.0579
16	Decel	15-0	8	7.81	-1.88	0.0173
17	Accel	0-45	22	28.85	2.05	0.1759
18	Decel	45-15	16	31.33	-1.88	0.1392
19	Accel	15-45	18	30.55	1.67	0.1528
20	Decel	45-0	19	24.72	-2.37	0.1304
21	Accel	0-60	25	38.28	2.40	0.2654
22	Decel	60-0	28	33.88	-2.14	0.2634
23	Accel	0-30	15	17.73	2.00	0.0737
24	Accel	30-60	25	45.14	1.20	0.3134
25	Decel	60-30	18	47.23	-1.67	0.2362
26	Decel	30-0	10	15.99	-3.00	0.0444
27	Accel	0-60	38	38.01	1.58	0.4009
28	Decel	60-0	35	33.87	-1.71	0.3293
29	Accel	0-30	18	17.73	1.67	0.0886
30	Accel	30-60	21	44.55	1.43	0.2599
31	Decel	60-30	14	46.63	-2.14	0.1813
32	Decel	30-0	13	16.40	-2.31	0.0592

APPENDIX D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

DENVER

VEH	YEAR	MAKE	MODL	CID		VEH	YEAR	MAKE	MODL	CID		VEH	YEAR	MAKE	MODL	CID
001	1974	BUIC	RIVI	455		002	1974	CHEV	CAPR	400		003	1973	CHEV	NOVA	350

MODE NO.	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG
1	5.60	99.8	815.2	1.06	9.0	5.42	114.6	627.7	2.16	10.8	13.41	276.1	383.0	0.14	10.3
2	4.61	90.9	955.6	1.06	8.0	4.49	81.2	761.7	1.16	9.8	14.39	325.1	454.1	0.20	8.8
3	7.09	98.6	1350.4	1.46	5.8	6.93	70.1	1120.4	2.16	7.1	22.65	392.5	666.9	0.47	6.5
4	2.90	44.3	804.9	1.24	10.0	3.46	50.8	632.1	2.25	12.3	9.28	254.2	385.1	0.18	10.9
5	2.46	64.8	682.7	1.32	11.2	3.04	66.5	552.8	2.81	13.3	5.38	191.4	370.7	0.34	12.9
6	2.02	45.9	631.4	1.06	12.5	2.38	37.0	522.9	1.53	15.1	5.01	147.6	343.6	0.55	15.0
7	4.73	187.9	615.4	1.79	9.6	4.00	134.3	523.3	3.12	11.9	5.94	255.5	374.6	0.24	11.2
8	2.82	104.3	660.6	2.18	10.6	2.93	81.6	571.2	3.01	12.5	6.73	215.1	360.8	0.74	12.3
9	4.36	160.2	611.7	1.33	10.1	3.95	133.4	524.2	2.35	11.9	4.58	165.5	385.2	0.96	13.5
10	2.96	91.3	694.6	1.68	10.5	3.18	59.5	551.0	2.13	13.6	10.80	148.9	422.1	1.31	12.9
11	6.65	342.7	604.4	0.93	7.6	5.46	239.9	528.3	1.46	9.6	6.98	315.4	380.9	0.49	9.4
12	4.38	167.7	859.1	1.82	7.8	4.70	120.9	661.5	2.27	10.2	12.62	232.3	476.8	1.25	10.1
13	7.43	354.4	718.6	1.11	6.8	6.38	272.2	579.3	1.65	8.6	11.45	381.1	421.8	0.52	8.4
14	3.18	116.9	625.4	1.45	10.8	3.08	88.2	511.5	1.64	13.4	6.92	190.4	368.3	0.94	12.9
15	4.21	60.5	716.5	0.92	10.6	3.54	43.0	576.0	0.87	13.6	16.11	184.1	371.5	0.58	12.5
16	8.23	92.9	1544.1	1.58	5.2	7.22	74.9	1246.6	1.41	6.4	35.70	444.8	780.8	1.41	5.6
17	4.26	165.4	639.7	0.91	9.7	3.97	131.9	518.9	1.38	12.0	10.63	194.4	356.2	0.35	12.6
18	3.21	111.4	754.1	1.10	9.4	3.47	121.3	602.6	1.24	11.7	7.75	231.9	415.8	0.54	11.0
19	3.73	136.1	607.7	0.81	10.7	3.01	148.8	545.5	1.22	11.3	4.33	237.6	349.9	0.39	11.8
20	4.04	150.2	876.5	1.11	7.9	3.81	103.9	660.1	1.26	10.6	9.10	257.9	475.7	0.65	9.8
21	7.14	356.8	634.5	1.10	7.3	5.49	298.5	526.2	1.15	8.8	10.51	347.9	391.5	0.35	9.1
22	5.13	179.0	734.9	1.34	8.6	4.44	139.8	635.9	1.62	10.2	8.80	247.6	453.7	0.95	10.2
23	6.12	160.1	1058.8	1.52	6.7	5.61	113.7	790.6	2.20	9.0	16.97	265.3	515.7	0.76	9.1
24	4.86	257.0	558.0	0.69	9.1	4.31	212.9	487.1	1.07	10.6	5.10	162.1	406.9	0.92	13.1
25	3.68	153.7	615.1	1.17	10.2	3.21	110.8	501.3	1.47	12.9	4.72	139.8	405.5	1.32	13.4
26	6.64	119.9	1003.1	1.23	7.3	5.18	82.4	816.0	1.16	9.2	16.45	230.3	538.2	1.11	9.3
27	5.02	244.4	672.3	0.93	8.2	5.24	235.4	545.3	1.31	9.5	8.60	287.3	415.3	0.64	10.1
28	3.51	110.8	722.6	1.23	9.8	3.61	107.6	554.0	1.45	12.1	7.00	176.8	435.8	1.22	12.1
29	4.94	125.6	986.0	1.27	7.4	5.03	124.6	766.8	1.81	9.1	15.68	245.8	488.2	0.71	9.6
30	6.14	294.0	545.6	0.68	8.6	5.00	256.0	504.7	0.97	9.6	7.14	249.3	371.2	0.42	11.3
31	4.09	183.1	639.5	1.06	9.4	3.56	139.7	504.3	1.21	12.1	6.56	223.7	404.8	0.49	11.3
32	6.66	152.4	971.8	1.09	7.2	4.92	138.6	795.6	0.98	9.2	16.25	269.8	558.5	1.08	8.8
NON	3.25	124.1	675.7	1.24	10.1	3.39	104.2	558.2	1.91	12.1	6.95	183.4	415.4	0.93	12.2
MAG	4.34	178.4	706.9	1.18	8.9	4.12	144.8	591.2	1.88	11.3	8.61	240.7	422.0	0.78	11.0
33	0.59	4.0	119.5	0.24	69.5	1.69	7.4	104.1	0.17	75.3	3.13	41.3	46.9	0.17	63.8
34	5.62	54.5	1439.4	0.89	5.8	5.95	56.2	1276.8	1.59	6.4	46.19	588.7	817.5	0.49	4.7
35	2.15	24.3	631.5	0.63	13.1	2.45	22.8	657.1	0.72	12.7	15.64	329.5	461.6	0.28	8.8
36	1.21	13.7	723.0	0.77	11.9	1.43	28.2	576.8	0.65	14.2	7.74	211.7	388.0	0.21	11.4
37	0.44	7.2	566.9	0.55	14.8	1.21	16.5	445.3	0.58	18.7	2.46	65.3	381.4	0.47	16.0
38	1.16	23.5	544.0	0.92	15.2	0.81	13.6	495.5	1.85	17.1	2.75	77.1	393.8	0.47	16.5
39	0.94	49.4	628.0	1.81	12.5	1.23	48.2	531.9	3.36	14.5	3.31	175.4	474.1	0.50	11.8

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX D,CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

DENVER

	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID
	004	1974	DODG	DART	318	005	1974	FORD	MAVE	302	006	1974	FORD	TORI	351
MODE NO.	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG
1	4.00	92.7	441.5	1.84	14.8	4.10	61.1	735.2	4.75	10.5	5.97	116.7	534.7	1.22	12.0
2	4.72	138.3	562.0	1.25	11.2	2.22	37.4	279.1	0.77	25.7	5.35	97.8	610.6	1.27	11.9
3	7.60	174.6	830.3	1.29	7.9	5.25	118.5	904.5	1.42	8.0	7.96	104.2	957.6	1.87	7.7
4	3.38	101.6	434.6	1.01	14.7	3.00	73.1	566.4	2.47	12.8	3.77	69.8	501.7	1.61	14.2
5	2.54	78.3	374.8	2.41	17.5	3.04	54.3	489.1	3.08	15.2	2.92	58.1	422.0	1.84	17.0
6	2.53	60.1	398.5	1.29	17.7	1.71	15.6	133.6	0.42	54.3	2.68	46.8	396.5	1.86	18.5
7	2.63	73.0	428.8	4.45	16.1	4.52	182.7	616.3	3.19	9.7	4.05	121.7	423.4	2.27	14.1
8	2.52	45.9	487.6	2.94	15.6	2.84	22.0	161.6	0.47	43.2	3.11	91.0	435.4	1.15	15.1
9	3.00	45.0	437.5	4.05	17.1	3.41	67.7	479.0	3.98	14.9	3.60	88.3	421.4	2.28	15.5
10	3.43	40.5	495.4	3.11	15.6	1.49	25.4	189.8	0.56	37.9	3.25	59.5	447.2	1.34	16.1
11	3.05	61.1	472.2	5.38	15.4	4.88	93.2	598.5	5.09	11.7	4.78	186.9	450.4	1.49	11.7
12	4.08	53.4	612.6	3.93	12.5	2.60	29.9	191.8	0.55	35.9	4.40	94.9	567.1	1.70	12.2
13	3.68	75.4	538.5	5.44	13.3	6.12	105.0	592.1	3.95	11.4	5.18	156.9	519.0	2.20	11.4
14	2.98	45.9	456.1	2.84	16.5	1.69	26.5	166.6	0.54	41.2	3.27	75.4	426.5	1.28	16.0
15	4.92	84.6	447.2	1.33	14.9	1.96	21.9	208.3	0.41	35.7	4.01	66.4	437.5	0.84	16.0
16	9.65	152.0	964.7	1.60	7.2	5.29	61.4	532.7	0.81	13.7	8.97	146.1	907.5	1.19	7.6
17	3.20	80.8	389.5	2.86	16.9	5.34	97.9	604.5	3.92	11.4	4.32	137.3	456.4	1.41	12.9
18	3.17	86.6	503.2	1.33	13.7	1.47	22.7	201.4	0.52	36.7	3.60	79.3	454.3	1.70	15.0
19	2.87	73.5	356.0	2.23	18.5	5.06	91.0	514.9	3.21	13.2	3.83	106.4	378.8	1.19	15.9
20	3.90	103.5	601.4	1.48	11.4	1.87	28.8	219.7	0.65	32.8	4.34	106.3	541.7	1.54	12.3
21	3.63	128.5	523.8	4.00	12.0	6.41	112.9	625.6	3.85	10.8	5.22	213.8	470.0	1.59	10.8
22	3.87	72.6	531.6	2.65	13.5	1.90	25.4	194.2	0.60	37.0	4.58	118.7	538.2	1.12	12.0
23	5.49	111.9	658.1	2.21	10.4	4.66	98.0	698.0	2.95	10.2	6.02	138.2	651.7	1.62	10.0
24	2.76	77.6	430.5	3.50	15.8	4.74	72.3	454.6	3.17	15.2	3.50	113.3	427.4	1.68	14.4
25	2.88	52.9	446.7	2.71	16.5	2.16	24.0	163.3	0.43	42.7	3.48	80.8	403.8	0.88	16.4
26	6.69	131.0	630.3	1.82	10.4	3.10	35.3	320.7	0.60	23.0	6.57	112.8	598.2	1.37	11.2
27	3.22	87.0	506.0	4.16	13.6	0.50	101.5	503.2	3.01	13.4	4.65	154.8	489.6	1.82	11.9
28	3.70	65.8	483.2	2.50	14.8	1.84	28.1	186.3	0.60	37.6	3.86	86.1	451.2	1.05	14.8
29	5.24	132.3	587.2	1.60	10.9	5.13	90.6	659.4	2.30	10.9	5.52	141.4	609.7	1.24	10.4
30	2.88	89.4	427.8	3.47	15.4	4.96	105.2	270.2	2.79	19.7	4.14	169.8	419.8	1.14	12.7
31	2.99	59.9	471.5	2.76	15.4	2.91	20.1	123.9	0.61	53.9	3.57	103.0	421.8	1.01	14.9
32	6.91	134.7	640.4	1.98	10.2	2.81	38.9	265.8	0.49	26.4	6.18	115.6	618.1	1.13	10.8
SUM	3.07	88.2	457.4	3.19	15.5	2.98	55.6	364.7	1.62	19.2	3.47	87.4	454.0	1.85	14.7
HAG	3.35	72.7	498.2	3.09	14.2	3.63	65.9	400.1	1.74	17.2	3.99	123.4	487.9	1.48	12.8
33	0.49	11.8	77.6	0.07	90.4	0.51	1.9	60.8	0.07	135	0.85	25.6	81.3	0.05	71.4
34	6.09	181.2	903.5	0.52	7.3	6.83	56.6	863.6	0.82	9.1	7.33	148.5	1108.2	0.84	6.5
35	3.40	115.0	511.0	0.33	12.6	2.98	29.4	499.0	0.38	16.0	3.28	51.0	574.4	0.42	13.5
36	2.34	86.4	390.2	0.29	16.6	3.02	61.1	310.9	0.22	21.3	1.78	17.1	499.2	0.47	16.7
37	2.64	90.5	279.8	0.94	20.6	1.87	27.9	282.2	0.40	26.7	1.67	29.1	359.1	0.43	21.6
38	2.05	45.0	360.5	1.51	20.3	2.10	32.2	326.7	0.87	23.1	2.23	20.8	376.3	5.80	21.3
39	2.41	34.8	450.5	5.16	17.3	2.60	49.9	349.8	1.11	20.3	2.38	48.2	418.4	1.90	17.7

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX D.CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

DENVER

	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CI
	007	1974	OLDS	CUTL	350	008	1974	PLYM	SCAM	318	009	1974	PONT	CATA	400
MODE NO.	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG
1	7.46	308.4	531.3	0.23	8.5	7.27	70.9	553.4	2.43	12.9	5.71	124.4	699.3	3.74	10.3
2	5.85	223.7	569.9	0.10	9.4	7.10	98.5	602.3	1.87	11.5	5.58	147.9	659.6	2.48	[illegible]
3	8.15	235.8	1024.8	0.46	6.2	11.42	127.7	921.5	2.05	7.7	9.26	226.7	1017.3	1.96	6.4
4	4.50	181.7	497.4	0.43	11.1	5.32	94.0	491.4	1.61	13.5	4.13	111.2	529.3	2.16	12.4
5	4.47	202.9	405.2	0.53	12.0	4.12	57.0	402.0	2.94	17.6	4.72	72.5	473.0	3.88	14.7
6	3.56	129.5	367.5	0.46	15.2	3.51	50.9	388.7	1.55	18.5	3.39	67.5	424.7	3.53	16.4
7	5.49	241.5	434.1	1.50	10.7	4.65	96.2	413.1	2.54	15.3	4.93	127.2	473.7	3.67	12.9
8	4.17	144.3	439.0	0.83	13.1	3.74	88.3	419.3	1.99	15.6	3.88	122.0	467.7	4.16	13.2
9	5.25	217.0	412.4	0.85	11.5	3.71	57.5	416.2	3.57	17.1	3.96	87.0	468.3	5.13	14.4
10	4.03	105.4	480.3	1.19	13.5	4.03	57.6	451.3	2.36	16.0	4.40	75.3	489.6	5.16	14.3
11	7.21	352.7	445.7	0.82	8.7	4.54	112.8	468.0	3.85	13.5	5.22	187.7	515.2	3.11	11.4
12	5.62	159.7	920.7	1.17	7.5	4.79	82.5	578.5	3.50	12.3	5.69	137.9	633.3	5.64	11.2
13	7.55	332.1	506.5	0.78	8.4	4.56	66.7	524.3	5.21	13.1	5.58	164.4	606.2	4.28	11.1
14	4.31	130.9	436.5	0.88	13.6	3.28	53.5	427.9	2.63	17.0	4.05	108.6	447.4	3.60	14.1
15	4.52	102.2	454.7	0.61	14.1	4.37	66.4	452.2	1.46	15.6	5.84	115.2	433.4	1.95	14.0
16	10.01	215.8	1030.3	1.27	6.3	10.32	173.9	962.0	2.17	7.0	12.04	270.9	1269.9	1.95	5.1
17	7.00	335.5	435.2	0.37	9.0	4.11	93.4	446.4	2.99	14.6	4.15	106.4	503.2	4.60	13.0
18	5.69	214.6	458.1	0.42	11.0	4.03	78.1	493.0	2.45	14.1	4.28	119.1	540.6	2.94	12.1
19	4.87	214.9	411.4	0.38	11.6	3.42	67.3	412.4	2.65	15.8	3.96	94.1	430.1	4.54	15.0
20	6.68	237.3	564.1	0.57	9.5	4.82	61.4	588.3	2.38	12.1	5.42	146.3	627.1	3.11	11.1
21	7.95	334.8	489.5	1.47	8.4	5.09	153.1	481.2	2.80	12.0	5.85	266.4	543.2	2.23	9.4
22	6.20	199.2	535.1	1.00	10.1	4.34	75.8	530.6	3.06	13.4	6.22	156.0	550.6	4.62	11.2
23	7.34	256.3	700.0	0.74	7.9	5.76	43.3	676.6	2.53	10.9	7.65	190.9	731.9	4.40	8.9
24	5.76	267.6	395.3	0.48	10.3	3.42	65.5	435.9	3.72	16.1	3.88	103.9	467.0	5.19	15.4
25	4.77	150.5	429.9	0.49	13.0	3.24	48.8	425.6	3.92	17.3	3.94	90.8	467.6	3.66	15.1
26	7.03	167.9	641.2	0.83	9.6	6.24	97.4	640.2	2.54	10.9	7.93	135.9	666.2	2.65	10.0
27	7.65	214.8	468.3	0.41	10.7	4.04	65.1	505.3	3.48	13.6	4.13	129.6	555.3	5.26	11.8
28	5.22	147.5	469.7	0.76	12.4	3.63	54.1	478.5	3.27	15.4	5.34	110.4	492.1	3.06	13.2
29	6.85	684.1	769.6	0.79	4.6	5.51	98.4	623.5	2.00	11.2	7.11	156.6	672.7	3.34	9.9
30	6.21	269.2	400.4	0.49	10.5	3.72	78.4	445.2	3.47	15.3	3.89	115.4	495.6	4.70	12.4
31	4.74	170.3	467.2	0.67	11.8	3.52	64.3	448.6	3.19	15.6	4.16	117.0	491.8	3.74	12.4
32	6.98	131.3	526.4	0.71	11.8	6.35	120.6	650.5	2.83	10.7	8.61	162.0	666.1	2.74	9.3
SUM	4.55	148.4	498.6	1.09	11.9	3.69	63.3	357.6	3.33	15.6	3.79	60.7	407.6	4.56	13.8
AVG	5.99	240.4	481.4	0.88	10.3	3.99	67.0	363.0	2.89	14.1	4.64	117.5	510.6	4.04	11.5
33	0.59	6.3	122.1	0.21	66.6	3.67	9.8	94.4	0.17	78.7	0.63	14.8	119.5	0.03	66.4
34	6.61	115.4	1553.7	0.22	5.1	5.66	135.2	1332.6	1.34	6.7	6.24	133.6	1407.1	3.14	5.4
35	3.65	29.8	753.1	0.65	11.0	3.21	65.2	572.1	0.59	13.7	2.44	42.5	489.7	1.42	15.6
36	1.64	29.4	595.9	0.65	14.0	2.48	66.1	455.9	0.37	15.6	2.25	46.6	546.0	1.55	14.2
37	2.01	16.9	392.3	2.03	20.4	2.88	14.7	326.6	2.26	23.5	1.85	21.5	363.0	2.16	23.1
38	2.38	31.5	416.1	2.20	18.8	2.34	35.8	368.9	2.66	21.7	2.10	42.2	406.8	3.54	19.7
39	3.77	34.4	513.1	1.44	15.4	2.63	39.2	425.6	3.13	18.3	2.14	39.7	470.4	4.34	16.4

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX D,CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

DENVER

	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID
	010	1974	VOLK	SEDA	97	011	1973	AMMO	GREM	232	012	1973	BUIC	CENT	350
MODE NO.	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG
1	4.68	61.6	224.2	1.17	26.4	2.44	109.5	791.0	8.11	9.1	4.20	193.7	667.3	1.26	9.0
2	6.57	100.7	234.5	0.96	21.5	1.10	9.0	152.7	0.59	52.1	5.07	220.7	711.2	1.21	8.3
3	7.51	88.1	355.7	1.40	17.1	2.40	21.4	749.8	2.61	11.2	7.21	242.4	1151.6	1.76	5.7
4	3.94	65.5	239.7	1.39	25.0	1.27	12.7	537.8	6.91	15.8	2.79	112.0	573.1	1.06	11.7
5	2.91	44.6	231.3	3.77	28.6	1.48	25.4	442.7	8.43	18.2	2.32	138.5	491.5	1.16	12.4
6	2.07	33.5	216.6	1.86	32.2	1.92	3.4	93.5	1.28	84.7	2.33	112.3	482.5	1.41	13.3
7	2.81	45.0	226.5	2.64	29.0	3.09	232.9	650.7	4.09	8.6	4.42	277.2	427.4	0.73	10.1
8	3.08	70.2	215.6	1.44	26.4	3.21	4.0	129.1	2.37	61.0	4.69	258.3	480.1	1.66	9.9
9	4.09	73.8	211.2	2.04	26.1	2.21	130.2	414.1	5.89	14.2	4.23	240.1	468.3	1.42	10.3
10	3.23	59.8	204.0	1.46	28.8	1.42	6.4	144.7	3.02	55.7	3.88	192.1	563.5	2.52	10.1
11	5.10	68.9	240.1	2.63	24.3	3.00	153.9	495.4	7.12	11.9	6.22	340.9	463.3	0.74	8.7
12	3.88	69.1	242.2	1.47	22.5	3.46	6.7	132.2	3.13	57.7	6.19	310.2	678.2	2.86	7.5
13	4.44	83.7	249.0	2.27	22.5	4.62	145.9	518.7	8.08	11.6	6.65	223.9	557.2	1.24	9.5
14	3.07	88.5	175.8	0.81	27.3	2.26	6.0	127.6	2.26	61.5	4.25	153.4	506.5	2.13	11.7
15	7.30	72.5	176.8	0.73	28.3	1.36	4.1	132.4	0.46	62.0	3.96	229.8	605.0	1.34	9.1
16	18.49	149.7	353.9	1.19	13.7	3.33	37.7	342.3	0.63	21.5	8.56	642.7	1350.2	2.05	3.7
17	5.05	62.3	197.0	2.52	28.5	2.91	173.4	117.4	11.88	22.2	3.78	221.8	540.8	1.05	9.8
18	4.14	81.7	242.1	1.27	23.1	1.23	5.5	142.7	1.30	57.2	3.15	187.8	575.9	1.42	10.1
19	6.12	64.3	190.7	2.16	28.2	4.49	121.0	491.9	4.95	12.7	3.44	208.9	514.3	0.99	10.4
20	4.35	65.7	301.2	1.81	21.2	1.84	5.6	157.2	1.58	51.6	4.34	248.6	677.5	1.53	8.2
21	4.20	86.6	249.0	1.83	22.3	4.54	200.3	620.2	5.96	9.3	7.01	240.2	520.7	0.97	9.6
22	3.85	78.6	233.6	1.47	24.0	2.26	7.0	98.9	1.54	75.7	5.26	205.0	649.1	2.51	9.0
23	6.15	87.5	283.9	1.62	20.1	2.76	19.1	644.2	8.19	13.0	5.38	309.3	882.9	2.47	6.4
24	2.90	50.9	234.2	3.61	27.4	3.47	98.3	453.0	6.67	14.4	5.49	179.7	448.1	0.84	11.9
25	3.52	58.5	194.4	1.39	29.8	2.51	4.3	112.7	2.65	69.6	4.49	158.0	504.9	1.85	11.6
26	4.37	100.4	349.0	1.64	16.5	1.62	8.0	176.7	0.71	45.6	7.52	365.2	848.8	1.58	6.1
27	3.75	70.1	258.1	3.05	23.3	3.74	104.8	468.4	7.07	13.8	5.72	216.6	525.4	1.00	10.0
28	2.75	37.6	229.4	2.52	29.9	1.61	8.3	132.0	1.78	59.1	4.12	188.5	601.9	2.36	9.7
29	6.91	85.3	267.7	1.67	21.0	2.40	16.6	587.1	7.90	14.3	4.53	285.5	824.5	2.13	6.8
30	2.47	44.5	249.1	3.64	27.1	4.02	183.0	462.8	4.49	11.6	5.18	196.9	453.9	0.75	11.4
31	3.92	58.8	215.4	1.56	27.7	2.63	3.0	123.6	2.97	65.0	5.75	171.0	495.6	1.35	11.3
32	10.71	109.4	258.3	1.13	19.1	1.58	11.2	179.7	0.55	43.9	13.56	388.1	794.6	1.28	6.1
SUM	3.21	55.3	226.3	2.39	27.4	2.11	44.6	309.2	4.92	23.0	3.62	147.2	561.9	2.32	11.0
BAG	4.17	76.0	221.1	1.99	25.1	2.36	45.3	323.7	4.97	22.1	4.98	226.5	565.7	1.52	9.5
33	2.04	25.7	71.5	0.54	74.9	0.41	0.4	39.2	0.04	215	0.39	1.5	127.3	0.18	67.8
34	5.29	80.1	380.5	0.21	17.0	5.35	4.9	470.4	0.46	17.9	3.84	29.4	1558.2	1.93	5.5
35	6.00	83.3	298.4	1.39	19.8	1.91	15.3	354.4	0.35	23.1	1.66	12.5	762.1	0.83	11.0
36	1.62	40.0	222.8	0.32	30.5	1.43	12.0	259.7	0.34	31.3	1.11	18.4	586.0	0.61	14.8
37	1.35	18.3	172.4	1.84	43.2	0.51	1.2	228.0	0.68	38.4	1.18	18.9	444.6	0.86	18.6
38	1.31	31.2	223.4	2.18	32.1	1.07	1.4	236.1	3.74	36.7	1.47	41.0	490.3	2.43	15.9
39	1.19	31.0	186.7	3.48	37.1	1.09	1.9	305.9	8.82	28.4	1.74	58.7	579.7	5.39	13.1

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX D,CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

DENVER

```
          VEH  YEAR  MAKE  MODL  CID          VEH  YEAR  MAKE  MODL  CID          VEH  YEAR  MAKE  MODL  CID
          ---  ----  ----  ----  ---          ---  ----  ----  ----  ---          ---  ----  ----  ----  ---
          013  1973  BUIC  RIVI  455          014  1973  CADI  FLEE  472          015  1973  CAPR  SEDA  155

MODE
NO.     HC     CO    CO2    NOX   MPG       HC     CO    CO2    NOX   MPG       HC     CO    CO2    NOX   MPG
--------------------------------------------------------------------------------------------------------------
 1     8.02 230.1  435.7  0.84  10.8      8.49 319.7  635.9  1.70  7.6       3.48   93.0  373.8  1.65 16.7
 2     6.76 186.5  676.3  1.11   9.0      8.68 380.2  703.3  1.29  6.7       3.48   79.6  393.6  1.70 16.7
 3    12.54 268.9 1009.9  1.39   8.0     12.55 789.5 1786.0  1.82  2.9       6.15  121.5  603.1  1.46 10.4

 4     4.95 110.6  572.9  0.95  11.6      6.52 299.8  619.0  1.26  8.0       2.81   65.6  341.0  1.70 19.6
 5     3.79 101.5  503.9  1.18  13.1      4.88 250.8  548.5  1.33  9.6       2.29   53.7  310.9  2.76 22.0
 6     3.17  94.1  479.5  0.95  13.9      3.90 173.0  527.3  1.07 10.9       2.29   43.3  267.5  1.67 25.9

 7     5.75 153.9  488.1  1.49  11.9      7.50 330.9  544.0  1.67  8.2       3.46  102.0  325.4  2.54 17.9
 8     4.38 181.1  498.0  2.09  11.1      6.28 264.9  613.3  1.41  8.5       3.48   52.6  309.1  3.62 22.0
 9     4.97 111.7  493.7  1.82  13.0      5.97 254.9  583.6  2.02  8.8       3.11   48.0  322.4  4.23 21.9

10     4.36 105.7  566.5  2.37  11.9      4.80 193.1  652.7  1.53  9.2       3.04   33.0  333.2  3.84 22.5
11     6.79 222.1  513.6  1.45  10.0      6.75 347.0  634.9  2.38  7.4       3.44   88.1  346.7  3.77 17.8
12     5.63 206.0  691.1  2.95   8.6      6.74 281.2  795.2  2.04  7.1       3.64   48.2  403.9  5.01 19.1

13     8.16 282.1  562.7  1.44   8.6      7.28 317.2  723.2  4.05  7.1       4.29   52.6  399.4  4.84 16.3
14     4.58 153.8  502.5  1.94  11.7      4.71 186.5  602.8  2.10  9.7       2.80   35.1  309.5  3.81 23.8
15     6.59  91.4  555.4  1.20  12.3      7.29 186.5  599.5  1.25  9.7       4.96   54.0  299.5  1.54 22.1

16    13.38 213.1 1246.2  1.62   5.5     10.30 348.5 1345.6  2.46  4.6       9.44  112.6  588.2  1.08 11.2
17     5.21 160.3  542.3  0.99  10.4      6.91 336.4  552.3  1.60  8.0       3.32   75.8  317.4  2.82 19.9
18     5.08 178.6  550.7  0.88  10.5      6.10 308.0  654.3  1.17  7.7       3.03   61.7  329.5  1.87 20.4

19     4.69 129.4  525.8  0.91  11.9     13.25 325.7  533.6  1.84  8.2       3.25   63.6  305.1  2.60 21.4
20     6.24 195.3  664.8  1.05   9.0      9.17 341.3  770.3  1.62  6.6       3.55   85.8  368.0  2.17 18.8
21     6.76 272.7  528.9  1.38   9.1      7.90 302.4  582.7  1.79  8.2       4.42  106.7  365.2  3.18 16.2

22     6.62 211.3  643.8  2.06   8.9      7.61 309.5  763.4  2.12  7.0       4.91   63.7  370.1  3.84 18.3
23     9.76 180.5  806.0  1.71   7.9      9.71 309.4  884.4  2.07  6.3       7.38   97.9  460.7  2.80 13.9
24     4.30 135.0  514.2  1.49  12.0      5.99 268.6  546.3  1.89  9.0       3.21   66.9  310.9  3.53 20.9

25     3.62 115.8  508.2  1.87  12.6      4.73 227.2  632.7  1.71  8.8       2.48   35.2  308.1  3.12 23.9
26     8.44 112.0  784.2  1.74   9.0      9.81 298.8  896.7  1.76  6.4       6.83   77.9  434.0  1.88 15.4
27     5.64 261.7  412.3  1.64  10.5      6.82 326.0  646.9  2.31  7.5       3.66   76.1  357.1  3.91 18.1

28     5.06 136.2  595.1  1.76  10.8      5.85 210.2  679.3  1.60  8.6       3.27   46.1  330.1  2.60 21.5
29     8.13 145.2  779.3  1.61   8.6      8.85 262.5  823.0  1.88  7.0       5.88   60.0  412.4  3.26 15.9
30     4.88 160.6  505.6  1.13  11.5      5.88 258.2  558.0  2.13  9.0       3.46   86.9  311.1  2.84 19.4

31     4.13 176.8  532.3  1.95  10.8      5.09 246.2  659.1  1.81  8.4       2.66   52.1  325.1  3.13 21.4
32     8.31 143.5  782.4  1.69   8.6      9.57 292.6  917.1  1.82  6.3       6.57   80.9  443.0  2.19 15.0


SUM   4.70 143.9  598.8  2.38  10.6      4.84 186.1  604.8  2.48  9.7      3.01   51.7  326.7  3.56 21.3
WAG   5.51 186.7  587.1  1.65   9.9      6.76 266.9  663.5  1.59  8.0      3.50   60.8  338.6  3.25 19.9


33     1.01  32.7   80.0  0.04  65.9      0.69  11.4  109.8  0.06 68.3       0.40    7.8   46.8  0.04  148
34    11.08 291.8 1761.8  2.29   3.9      5.23 141.9 1548.5  0.82  5.0       4.81  131.9  507.8  0.24 12.2
35     8.21 124.6 1181.6  5.48   6.3      2.92  95.8  960.3  0.49  7.9       2.14   30.3  341.2  0.26 21.7
36     5.79  83.0  901.9  3.11   8.4      2.83  88.5  811.4  1.23  9.3       2.23   62.7  285.0  0.24 22.7

37     3.06  45.5  676.2  2.21  11.7      2.22  50.0  537.1  1.98 14.3       1.90   42.9  225.1  0.69 29.7
38     3.47 118.8  632.2  3.21  10.7      1.71  31.5  613.5  3.84 13.3       1.81   28.2  266.6  2.21 28.0
39     2.59  95.9  586.4  4.23  11.9      1.78  53.8  400.4  3.90 18.1       2.02   17.4  321.7  6.71 25.0


EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO
```

```
                                    APPENDIX D,CONT'D

                     LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

                                         DENVER

        VEH  YEAR  MAKE  MODL  CID        VEH  YEAR  MAKE  MODL  CID        VEH  YEAR  MAKE  MODL  CID
        ---  ----  ----  ----  ---        ---  ----  ----  ----  ---        ---  ----  ----  ----  ---
        016  1973  CHEV  VEGA  140        017  1973  CHEV  NOVA  250        018  1973  CHEV  NOVA  307

MODE
NO.     HC     CO    CO2   NOX   MPG       HC     CO    CO2   NOX   MPG       HC     CO    CO2   NOX   MPG
-----------------------------------------------------------------------------------------------------------
 1     1.70   75.1  541.5  5.01 13.3      1.01  322.1  735.1  1.57  7.1      9.72 196.1  376.6  0.47 12.4
 2     0.91    4.1  186.8  0.64 45.2      1.71   37.2  278.3  0.48 25.9     13.44 224.6  545.6  0.66  9.4
 3     1.37  132.7  519.9  1.36 12.1      3.47   78.2  714.9  1.79 10.5     14.59 272.8  865.4  0.93  6.6

 4     0.72   24.7  475.2  2.81 16.9      1.57   50.2  519.8  2.11 14.7      5.10 129.2  468.4  0.95 12.9
 5     0.70   10.4  370.4  4.26 22.2      1.77   35.3  386.1  3.78 19.9      3.69 135.8  365.8  0.80 15.0
 6     1.40    3.6  142.9  0.67 58.0      0.77   17.1  172.3  0.32 44.0      5.55 120.1  367.4  0.77 15.5

 7     0.81   29.6  496.9  5.83 16.3      4.69  123.8  389.3  1.44 14.8      4.44 188.0  357.9  0.90 13.3
 8     2.97    2.7  172.2  0.94 47.8      1.83   15.7  187.8  0.58 40.7      7.31 177.1  398.5  1.44 12.7
 9     0.56   31.3  376.2  4.68 20.8      1.79   43.5  396.7  4.13 18.9      4.99 179.5  373.0  1.20 13.2

10     1.19    6.9  149.8  0.69 54.0      0.98   15.3  188.0  0.72 41.2      7.79 145.7  444.2  1.50 12.7
11     0.93   40.5  478.3  5.81 16.3      4.42  180.9  436.9  2.06 12.1      6.84 251.8  381.1  1.20 11.1
12     3.92    6.2  164.6  0.83 47.5      1.11   17.5  197.8  0.67 38.8     10.79 222.2  518.3  1.69  9.8

13     1.27   34.8  499.1  6.95 15.7      7.69  210.8  524.5  1.48 10.1      8.98 276.4  415.3  1.47 10.1
14     3.04    5.7  133.0  0.58 58.6      0.95   12.9  133.2  1.01 56.7      7.13 143.5  388.4  1.36 14.0
15     1.32    6.0  129.2  0.39 62.1      0.96   25.5  184.0  0.35 39.1      8.97  94.4  481.2  0.80 13.5

16     2.49   48.7  276.5  0.63 24.6      2.15   72.1  504.9  0.51 14.1     30.53 264.5 1053.6  1.19  5.7
17     1.28   41.7  479.2  5.71 16.2      5.15  109.6  639.2  3.90 10.7     12.58 286.1  355.6  0.38 10.5
18     1.22    6.7  131.2  0.60 61.0      0.71   20.7  199.4  0.52 37.9      9.05 201.9  422.5  0.40 11.5

19     1.14   29.3  410.3  4.84 19.3      5.69   52.2  500.4  3.19 14.8      6.82 179.9  405.8  0.44 12.5
20     1.30    9.0  134.4  0.70 58.2      0.73   24.5  234.9  0.59 32.2     10.05 219.4  525.7  0.51  9.8
21     1.32   56.8  573.2  7.96 13.3      8.96  195.5  642.4  1.08  9.1      7.88 212.4  439.7  5.35 11.1

22     3.98   10.3  122.6  0.68 58.6      1.09   16.6  168.8  0.86 44.8      6.87 122.6  533.1  3.80 11.9
23     1.49   72.3  514.7  4.04 14.0      6.38   96.6  810.0  2.76  9.0     10.85 169.6  646.3  1.95  9.4
24     1.22   32.9  374.4  4.92 20.6      2.48   60.9  459.1  3.64 15.8      7.02 188.7  358.7  1.08 13.1

25     3.09    5.9  124.4  0.66 61.9      0.63   11.9  135.0  1.20 57.0      6.41 191.9  373.3  1.12 12.8
26     1.56   12.2  179.6  0.57 43.6      0.96   34.2  277.1  0.50 26.6     13.22 176.6  637.3  1.05  9.3
27     1.16   26.7  440.5  6.32 18.3      5.53  140.6  484.5  2.57 12.3     12.33 231.2  408.2  1.44 11.0

28     2.23   13.7  116.3  0.49 61.2      0.76   17.4  197.5  0.72 39.0      8.56 191.4  427.3  1.02 11.7
29     1.33   54.7  473.5  3.34 15.7      5.19   93.7  668.2  2.48 10.7     16.76 225.1  540.0  0.71  9.4
30     1.19   37.6  420.1  5.72 18.4      3.28  136.7  466.4  2.01 12.8      7.72 202.4  365.7  1.42 12.5

31     3.79    6.0  123.2  0.51 61.4      0.72   12.0  181.9  1.17 43.7      6.97 199.7  407.7  1.73 11.9
32     2.17   14.4  175.2  0.45 43.4      0.94   38.7  280.5  0.49 25.8     14.46 194.0  671.0  1.49  8.7

SUM   1.34   19.4  282.8  2.48 27.9      2.26   54.3  376.9  1.89 18.9      6.40 154.6  420.8  1.57 13.0
WAG   1.38   23.9  314.7  2.68 24.9      2.65   56.8  364.0  1.72 19.2      8.66 210.9  431.9  1.41 11.2


33     0.27    9.0   30.0  0.07  197      0.65   14.3  104.6  0.37 68.7      0.81  22.7   77.8  0.03 76.5
34     2.90   87.9  313.0  0.61 19.3      6.31  109.2  531.1  0.48 12.3      4.54 165.9 1001.5  0.32  7.0
35     1.59   49.1  176.2  0.31 34.4      0.98   24.0  598.2  0.52 13.9      2.06  97.9  604.5  0.25 11.6
36     0.88    9.6  201.1  0.54 40.5      0.51   16.6  683.6  0.58 12.5      1.32  57.9  503.6  0.28 14.8

37     0.95    6.7  213.7  0.50 39.1      0.18    9.2  471.1  0.71 18.3      2.47  56.8  320.1  0.63 21.3
38     0.50    5.6  219.9  1.00 38.6      1.07   17.9  251.1  1.02 31.4      2.45  65.4  380.5  1.49 18.1
39     0.53   12.3  250.1  1.78 32.7      1.34   18.8  312.6  3.26 25.6      4.32 114.2  402.3  2.47 14.9


EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO
```

APPENDIX D,CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

DENVER

VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID
019	1973	CHEV	NOVA	307	020	1973	CHEV	MALI	350	021	1973	CHEV	MALI	350

MODE NO.	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG
1	11,33	205,5	434,2	0,69	11,2	11,50	399,1	839,3	0,95	5,9	14,72	333,8	730,1	2,72	6,8
2	9,37	226,1	532,3	0,56	9,7	2,56	59,4	150,9	0,34	35,2	2,40	39,7	372,5	0,46	20,1
3	15,03	312,4	784,3	0,78	6,7	6,97	240,7	952,4	0,81	6,6	7,40	139,8	1043,0	2,02	7,0
4	6,70	171,3	429,8	0,52	12,3	5,77	189,7	608,1	0,64	9,6	5,03	98,2	741,8	4,20	10,5
5	5,26	131,4	358,4	0,99	15,3	7,13	206,4	477,6	0,65	10,8	5,46	109,8	591,7	3,50	11,5
6	5,30	134,6	329,0	0,60	16,0	1,12	22,1	249,1	0,21	30,9	0,82	11,7	208,5	0,27	38,7
7	6,61	161,3	367,3	1,13	13,8	2,51	447,5	706,9	0,93	6,2	12,30	393,9	684,0	1,42	6,6
8	6,24	190,6	353,1	0,93	13,2	2,23	29,2	256,2	0,27	28,7	5,16	8,6	200,3	0,82	38,5
9	6,82	150,3	366,2	1,19	14,2	12,81	393,4	533,5	0,51	7,4	9,18	270,0	545,5	1,65	8,9
10	7,31	166,6	405,0	0,96	12,9	1,17	26,3	307,2	0,24	25,0	0,99	10,6	252,8	0,54	32,5
11	8,83	234,6	407,8	0,82	11,0	17,11	542,4	713,1	0,77	5,5	13,13	508,1	646,4	1,28	6,0
12	9,33	250,0	486,8	0,95	9,8	2,33	35,2	316,3	0,29	23,4	1,26	11,5	262,2	0,52	31,2
13	11,52	283,5	439,0	0,80	9,6	16,95	442,5	667,5	0,66	6,3	14,93	443,1	665,6	1,29	6,3
14	7,19	190,8	353,8	0,84	13,1	1,73	58,6	283,7	0,23	23,1	1,14	14,1	273,6	0,61	29,6
15	7,29	114,3	444,8	0,56	13,7	1,75	47,4	394,6	0,24	18,7	1,34	28,4	303,0	0,33	25,2
16	20,40	277,3	1001,2	0,68	5,9	7,23	127,2	1034,2	0,52	7,1	4,20	64,5	718,9	0,57	10,6
17	10,69	202,5	396,1	0,61	11,9	16,31	508,5	685,0	0,57	5,8	13,35	286,6	653,5	1,46	7,7
18	8,02	233,7	390,3	0,38	11,3	1,22	26,8	336,8	0,34	23,2	1,21	18,8	298,3	0,32	26,8
19	7,14	134,7	412,8	0,55	13,7	17,73	262,7	666,4	1,07	7,8	13,09	218,3	606,1	1,04	8,9
20	9,53	245,6	498,7	0,50	9,7	2,10	52,0	387,4	0,14	18,7	1,62	25,6	347,5	0,38	22,6
21	10,44	300,1	420,1	0,72	9,6	26,12	553,8	856,9	1,13	4,9	17,55	541,6	748,9	1,31	5,4
22	9,53	250,4	459,1	0,69	10,1	2,20	40,7	302,8	0,24	23,8	1,25	11,4	248,0	0,63	32,9
23	12,70	287,0	598,4	0,58	8,1	10,46	305,2	805,3	0,96	6,7	7,20	139,7	813,7	4,47	8,4
24	8,27	201,2	356,9	0,66	12,7	14,46	343,7	561,9	0,56	7,7	11,89	320,6	518,1	1,12	8,4
25	8,03	216,7	335,6	0,61	12,7	1,67	35,9	258,4	0,18	27,7	0,90	9,7	260,6	0,36	31,8
26	11,23	180,5	623,4	0,72	9,4	3,38	49,7	489,2	0,29	15,4	1,95	29,6	366,5	0,38	21,2
27	11,32	263,0	398,7	0,55	10,5	15,99	455,9	609,1	0,58	6,4	15,71	459,4	541,2	1,12	6,8
28	10,81	240,6	398,5	0,55	10,9	1,60	33,8	311,4	0,20	24,0	2,57	37,3	376,6	1,31	19,9
29	15,36	275,8	503,5	0,41	9,0	13,76	376,7	970,5	0,59	5,5	6,80	103,7	827,3	4,10	8,8
30	8,01	220,3	350,1	0,42	12,3	15,20	436,0	627,6	0,54	6,5	14,75	538,4	596,6	0,90	6,0
31	10,46	288,9	335,7	0,50	10,8	2,57	41,7	215,7	0,16	30,7	0,91	6,5	190,2	0,29	43,7
32	13,57	239,9	616,5	0,77	8,6	3,30	57,6	476,9	0,28	15,4	1,90	10,8	288,3	0,22	28,7
SUM	7,78	196,1	384,6	0,63	12,4	6,14	173,2	484,8	0,60	11,9	5,07	132,7	427,2	1,14	13,6
BAG	9,22	235,2	402,5	0,67	11,1	6,24	217,8	524,0	0,46	10,0	5,36	161,6	477,8	1,12	11,9
33	2,38	40,3	53,7	0,02	71,2	1,65	53,9	159,0	0,13	35,7	0,60	4,6	52,7	0,06	143
34	22,07	433,9	788,2	0,23	5,8	7,13	206,5	1177,7	0,79	5,8	4,29	36,8	451,0	0,41	17,0
35	1,64	77,6	807,7	0,37	9,5	1,52	61,7	831,8	0,47	9,5	2,03	58,0	608,0	0,47	12,6
36	1,10	60,6	532,4	0,25	14,1	1,28	54,0	529,8	0,31	14,3	1,75	48,9	408,9	0,34	18,1
37	1,99	69,6	337,3	0,38	19,6	1,65	46,0	349,6	0,24	20,8	1,99	39,1	295,9	0,28	24,4
38	2,79	104,9	353,9	0,41	16,8	1,22	21,6	381,6	0,70	21,2	1,62	27,4	330,7	0,56	23,4
39	7,98	211,0	295,7	0,66	13,6	1,94	64,4	422,5	0,99	16,8	1,25	26,4	371,0	1,67	21,3

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX D,CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

DENVER

```
         VEH  YEAR  MAKE  MODL  CID         VEH  YEAR  MAKE  MODL  CID          VEH  YEAR  MAKE  MODL  CID
         ---  ----  ----  ----  ---         ---  ----  ----  ----  ---          ---  ----  ----  ----  ---
         022  1973  CHEV  MONT  350         023  1973  CHEV  CAPR  400          024  1973  CHRY  NEWP  400

MODE
NO.      HC    CO    CO2    NOX   MPG       HC    CO    CO2    NOX   MPG       HC    CO    CO2    NOX   MPG
---------------------------------------------------------------------------------------------------------------
 1      3.08 104.6  593.9  1.52 11.6      6.68 109.6  422.0  4.07 14.4      9.87 166.1  438.6  1.22 12.1
 2      3.08  96.6  686.1  1.20 10.5      2.25  30.1  280.9  0.39 30.0      9.65 248.3  655.7  1.17  8.2
 3      4.98 157.2 1071.0  1.10  6.7      8.08 145.6  961.4  2.79  7.3     15.23 338.6  938.6  1.32  5.8

 4      2.32  78.1  541.6  0.78 13.2      4.29  58.5  776.2  4.64 10.1      6.63 156.1  448.7  1.03 12.4
 5      1.78  65.7  465.5  1.39 15.5      3.44  65.5  631.6  4.56 11.9      5.19 116.6  481.7  1.99 13.0
 6      1.46  38.4  420.6  1.12 18.3      1.00  12.1  312.5  0.56 26.5      5.01 106.4  499.3  1.70 13.0

 7      1.89  84.7  492.8  2.87 14.0      9.50 274.1  688.6  2.36  7.7      7.06 150.0  467.1  1.71 12.2
 8      1.51  60.6  479.4  2.18 15.3      1.49  13.5  326.0  0.84 25.2      6.11 190.8  544.1  2.13 10.3
 9      1.57  62.4  469.7  2.36 15.5      6.41 288.9  639.8  2.01  8.0      5.81 101.2  533.2  3.71 12.5

10      1.38  46.0  513.8  1.94 15.0      1.71   9.6  284.2  0.81 29.1      6.11 118.5  604.1  2.97 11.0
11      2.05  97.3  552.4  3.30 12.5      9.06 391.4  764.5  1.81  6.3      8.54 271.1  504.3  2.04  9.3
12      1.77  65.7  647.7  2.46 11.7      2.41   2.7  172.0  0.70 48.3      8.04 185.4  756.5  3.80  8.3

13      2.27  96.0  628.3  3.71 11.3      9.02 458.4  870.2  2.19  5.5      9.04 227.6  595.0  3.06  9.0
14      1.31  45.4  470.6  1.95 16.1      1.76   9.8  261.2  0.70 31.4      5.73 129.4  560.0  2.70 11.4
15      1.52  43.6  543.7  0.83 14.4      1.41  22.3  333.0  0.28 23.8      7.60 135.9  537.3  1.25 11.5

16      3.79 100.9 1184.2  1.07  6.6      3.10  68.3  861.8  0.52  9.1     16.02 331.9 1024.7  1.53  5.5
17      2.18  79.9  559.4  2.75 12.8      9.32 388.6  889.6  2.50  5.8      7.62 250.7  504.9  1.12  9.8
18      1.69  56.3  556.4  1.38 13.6      1.33  16.0  323.8  0.57 25.1      6.68 170.6  550.8  1.57 10.6

19      1.84  63.9  490.7  1.72 14.9      7.40 292.0  740.1  1.92  7.3      6.30 152.9  502.1  2.09 11.6
20      2.14  77.5  655.7  1.52 11.3      1.46  13.4  344.1  0.63 23.7      8.18 183.4  643.7  2.03  9.3
21      2.86 150.6  612.8  3.38 10.3     11.76 496.9  957.6  2.14  5.0      9.07 327.4  522.4  1.45  8.3

22      1.94  81.1  589.1  1.84 12.3      2.32  10.6  277.9  0.55 29.4      8.35 205.2  604.8  2.41  8.8
23      3.15 121.3  794.6  1.69  8.9      5.00 109.1 1193.4  6.10  6.4     11.50 273.5  796.1  2.40  7.0
24      1.75  73.5  501.5  2.56 14.3      6.78 264.5  698.9  2.35  7.8      6.04 168.9  511.5  3.09 11.1

25      1.25  45.4  492.1  1.94 15.6      1.96  10.6  295.5  0.48 27.9      5.87 131.1  518.0  2.38 12.0
26      2.15  84.3  839.5  1.25  9.4      1.77  25.1  419.7  0.30 19.1     12.14 215.8  738.7  1.76  8.0
27      2.00  89.5  597.3  3.24 11.9      6.42 294.2  784.1  2.58  7.0      8.99 301.5  558.9  2.13  8.4

28      1.39  46.5  559.2  1.97 13.9      1.37  11.9  324.2  0.60 25.6      7.71 157.0  545.0  2.03 10.9
29      2.74 106.0  732.5  1.32  9.8      4.99 105.1  959.8  4.70  7.8     10.95 258.3  696.7  1.63  7.8
30      1.87  83.0  513.0  2.80 13.7      8.33 411.3  714.0  1.32  6.4      7.97 257.7  478.9  1.85  9.8

31      1.50  66.5  531.8  2.07 13.8      2.02  10.5  297.2  0.65 27.7      6.94 205.6  521.1  1.74 10.2
32      2.49  78.7  821.5  1.42  9.3      1.77  22.7  384.6  0.34 20.8     12.81 251.1  694.4  1.24  7.8


SUM    1.52  57.5  518.0  2.16 14.5      3.44 116.3  533.7  2.01 12.2      6.50 168.6  543.2  2.30 10.7
BAG    1.62  73.6  576.1  2.30 12.7      3.73 139.0  569.6  1.78 11.1      6.75 212.4  572.8  2.31  9.6


33      0.48  14.2  103.6  0.06 69.6      0.65  13.3   75.9  0.07 89.8      1.72  50.7   75.3  0.03 55.3
34      5.11 161.3 1272.1  0.65  5.8      6.83 181.7  955.3  0.79  7.4     19.16 592.1  943.0  0.44  4.6
35      2.42  82.2  679.8  0.33 10.9      1.64  70.3  727.1  0.44 10.5      9.01 287.9  488.7  0.23  9.2
36      1.30  50.2  453.2  0.19 16.6      1.20  54.4  522.1  0.33 14.5      4.65 177.3  405.2  0.25 12.7

37      0.95  47.4  344.8  0.31 21.0      1.35  38.4  385.6  0.39 19.7      4.10 101.1  378.6  1.28 16.1
38      0.89  11.8  386.7  1.43 21.7      1.35  14.0  422.2  2.65 19.8      3.67  74.6  478.0  2.88 14.6
39      0.64  19.1  465.5  3.10 17.8      0.57  18.5  527.7  3.79 15.9      4.53 116.0  559.4  2.98 11.7
```

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX D,CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

DENVER

VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID
325	1973	DATS	1200	71	326	1973	DODG	DART	225	327	1973	DODG	CHAR	318

MODE NO.	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG
1	5.12	57.9	251.8	0.92	24.7	8.55	106.3	450.6	2.02	13.8	6.12	196.4	567.7	1.04	10.1
2	4.36	59.8	393.9	1.35	18.0	2.58	14.6	254.7	1.12	31.0	6.11	196.0	556.8	0.87	10.0
3	8.93	66.8	502.8	1.20	14.1	6.68	91.0	596.7	2.06	11.7	9.18	253.2	930.1	1.11	6.5
4	2.58	35.1	274.6	1.37	26.3	6.72	198.8	435.2	0.70	11.5	3.19	147.7	525.2	1.11	11.6
5	1.77	24.3	243.4	2.10	30.9	5.78	138.8	376.6	1.42	14.4	1.91	83.8	455.8	1.47	14.8
6	1.64	16.6	245.9	1.73	32.0	1.41	12.0	124.0	1.00	58.1	3.13	88.4	397.2	1.39	16.3
7	2.01	42.1	202.2	1.00	32.3	6.16	173.1	530.2	4.30	10.8	4.89	148.0	494.5	2.92	12.0
8	1.98	74.7	180.9	0.75	28.3	1.44	21.6	159.4	0.85	44.8	3.79	114.6	465.8	2.08	13.5
9	2.14	66.2	184.3	0.47	29.8	5.15	154.2	394.2	1.41	13.6	4.62	131.4	465.1	2.77	12.9
10	2.14	47.8	216.5	1.75	29.8	2.56	21.5	144.7	0.94	40.8	4.27	133.6	454.8	1.78	13.7
11	2.97	83.8	205.7	0.75	25.8	7.46	272.3	532.3	2.75	9.0	5.40	219.7	495.8	1.02	10.3
12	2.87	80.2	257.2	1.58	22.8	2.69	24.3	175.0	0.44	41.0	6.19	169.5	571.7	2.20	11.3
13	3.38	89.0	239.7	1.23	22.7	6.94	270.3	511.7	2.00	9.3	6.74	227.1	523.2	1.88	9.8
14	2.15	49.4	202.6	1.53	30.8	1.91	19.2	130.1	0.73	53.4	4.48	132.3	427.6	1.61	13.7
15	3.43	58.8	232.0	0.79	26.5	2.01	13.6	199.8	0.88	39.0	5.05	188.2	435.4	0.85	13.2
16	8.19	130.8	472.7	1.07	12.6	5.17	79.1	408.0	0.72	16.2	12.08	272.5	898.8	1.08	6.5
17	3.27	69.0	204.2	1.04	27.5	9.70	350.9	469.8	1.16	8.4	5.62	196.3	397.3	0.96	12.3
18	2.76	52.9	270.3	1.23	24.5	2.04	16.4	168.2	1.09	44.3	5.09	177.8	479.1	0.98	11.5
19	2.81	55.1	220.9	1.20	28.0	7.44	223.0	421.2	1.33	11.1	5.20	175.8	353.8	0.35	13.3
20	2.98	67.1	329.4	1.32	20.0	2.42	24.3	177.0	0.89	39.8	6.65	206.7	506.6	1.11	9.7
21	3.06	88.8	209.3	0.72	25.0	8.10	322.7	619.2	3.72	7.7	6.50	222.6	510.2	0.45	11.1
22	3.24	90.2	233.5	0.91	23.0	2.63	16.9	142.9	0.57	49.9	5.88	161.3	410.3	2.45	12.9
23	4.73	96.8	306.3	1.27	18.7	9.99	330.8	489.2	0.92	8.5	8.16	219.4	660.3	1.58	9.6
24	2.37	63.2	241.8	1.53	25.5	6.24	251.0	388.6	1.48	11.1	5.07	172.4	427.3	1.67	12.4
25	2.06	46.1	215.0	1.80	30.2	1.78	19.0	116.1	0.55	58.6	4.74	148.7	420.8	1.48	13.3
26	5.19	86.9	339.0	1.25	18.0	2.87	14.4	242.3	0.96	32.4	9.17	181.2	618.8	1.20	9.5
27	3.04	94.3	238.9	1.16	22.4	7.16	321.2	444.1	1.39	9.1	6.60	226.5	478.2	1.44	11.3
28	2.64	57.0	238.9	1.40	26.3	2.73	17.8	147.9	0.81	48.1	6.12	153.2	479.2	1.61	12.0
29	4.52	90.5	295.4	1.22	19.8	8.55	281.3	507.0	1.05	9.1	6.39	245.3	601.8	1.07	9.8
30	2.81	79.0	238.5	1.27	23.9	6.74	266.6	490.2	2.10	9.5	5.74	209.5	443.7	2.10	11.2
31	2.33	59.4	222.9	1.66	27.4	1.48	22.2	124.2	0.60	54.2	5.30	166.2	452.2	1.77	12.2
32	5.75	91.2	336.1	1.32	17.8	2.92	21.8	221.1	0.64	33.5	9.73	197.3	629.7	2.49	9.1
SUM	2.15	46.5	234.7	1.91	28.2	3.80	99.1	307.5	2.14	18.7	4.79	140.0	480.1	2.30	12.4
HAG	2.68	72.5	227.4	1.35	25.4	4.04	118.5	311.9	1.44	17.4	5.53	188.7	507.2	1.76	10.8
33	0.32	4.0	23.9	0.01	283	0.45	4.9	35.9	0.03	167	0.71	27.6	127.7	0.07	51.1
34	4.53	83.3	365.8	0.23	17.5	5.28	104.9	464.6	0.40	13.7	6.35	308.3	977.6	0.71	6.0
35	1.88	43.3	254.7	0.20	27.0	3.31	49.9	303.7	0.32	22.6	3.32	160.8	605.1	0.44	10.2
36	1.60	33.2	269.9	0.34	27.1	2.19	28.4	232.8	0.35	31.2	2.45	113.2	470.7	0.51	15.5
37	1.09	16.6	220.5	0.70	35.5	1.82	6.3	220.6	2.62	37.6	2.67	38.3	355.3	2.55	23.9
38	0.99	13.1	191.5	2.56	41.2	1.83	15.1	256.1	4.13	31.1	3.22	70.4	391.6	2.64	17.3
39	1.13	13.3	231.8	4.17	30.6	2.20	42.0	293.8	3.23	24.2	3.86	106.2	488.8	3.04	13.4

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX D,CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

DENVER

	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID
	028	1973	FORD	PINT	97	029	1973	FORD	MAVE	250	030	1973	FORD	MAVE	302
MODE NO.	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG
1	8.75	63.2	278.3	5.01	21.9	6.17	157.3	390.5	0.66	14.2	5.62	97.2	929.3	4.53	8.1
2	2.00	24.6	93.6	0.59	64.0	6.89	180.6	433.9	0.55	12.0	2.31	35.0	232.8	0.54	30.1
3	3.15	164.8	331.3	3.87	14.8	10.11	216.3	656.7	0.66	8.6	5.95	51.6	831.5	1.63	9.5
4	3.20	53.1	233.3	4.66	27.2	5.23	140.0	345.8	0.49	15.2	3.52	43.4	616.7	2.27	12.7
5	2.03	24.0	237.9	5.69	31.5	4.35	129.2	300.8	0.72	17.1	3.75	24.6	422.1	3.54	19.8
6	1.41	7.8	76.4	0.79	93.9	4.10	114.3	290.3	0.54	18.4	1.82	16.1	129.8	0.57	55.2
7	2.84	47.0	214.1	3.56	29.9	4.76	147.3	311.1	0.87	15.9	6.17	198.1	681.4	3.56	8.8
8	2.69	9.7	95.2	1.11	74.6	4.39	133.7	348.9	1.26	15.5	4.50	24.8	156.8	0.48	42.2
9	1.66	26.5	208.8	4.20	34.7	4.51	122.1	313.4	1.20	17.1	4.06	23.7	578.6	5.10	14.1
10	1.58	8.8	86.0	1.23	84.7	4.90	118.9	356.4	1.28	15.9	1.44	16.6	196.2	0.65	39.1
11	3.38	76.0	214.4	3.00	25.8	5.35	168.9	354.7	1.16	13.9	5.72	94.2	667.7	4.41	10.6
12	1.79	9.5	102.7	1.20	72.0	5.94	157.0	446.4	1.61	12.5	3.45	19.8	138.4	0.65	49.2
13	4.05	83.4	245.9	3.50	22.8	6.31	195.6	411.8	1.31	12.0	7.23	109.8	695.8	4.39	10.0
14	2.21	7.6	83.1	0.99	87.0	4.47	120.6	328.6	1.18	16.7	1.87	21.3	159.5	0.58	44.6
15	2.31	23.1	84.4	0.39	69.3	5.58	123.2	350.5	0.60	15.8	1.96	19.5	171.2	0.42	42.7
16	3.43	95.2	173.7	0.31	26.4	11.29	206.9	715.7	0.66	8.2	5.12	23.5	498.5	0.63	16.1
17	6.87	81.9	227.4	3.26	23.5	5.84	166.9	321.1	0.73	14.7	6.22	53.7	702.6	5.12	11.0
18	1.93	11.7	93.6	0.73	75.2	5.05	162.1	351.0	0.53	14.3	1.85	23.8	192.5	0.58	37.6
19	5.31	66.7	162.0	3.44	31.0	5.62	141.5	302.4	0.67	16.4	6.73	103.5	549.2	4.42	12.1
20	2.37	19.3	93.3	0.53	67.6	6.09	176.7	423.8	0.76	12.3	1.92	29.6	222.7	0.63	32.2
21	5.36	82.1	190.7	2.03	26.4	6.91	214.9	396.4	1.17	11.7	8.57	188.6	703.7	4.07	8.6
22	2.67	20.2	80.0	0.79	73.8	6.23	191.4	439.9	1.14	11.7	2.62	22.0	198.5	0.56	37.1
23	6.73	92.6	285.6	4.56	19.6	8.47	231.8	509.2	0.78	9.9	6.25	52.3	848.5	3.49	9.4
24	2.62	55.1	212.1	3.34	28.9	4.92	176.8	313.6	0.66	14.6	5.40	58.3	577.4	4.17	12.9
25	2.11	5.6	88.0	1.12	89.2	4.37	124.7	305.9	0.90	17.2	2.86	18.0	170.0	0.61	42.8
26	2.18	29.2	106.2	0.05	55.8	8.21	197.1	470.0	0.73	11.0	2.84	32.8	250.6	0.56	28.5
27	3.56	81.5	235.9	3.88	23.6	5.61	195.5	377.8	1.04	12.6	6.01	58.4	619.9	4.74	12.1
28	2.18	12.8	84.6	0.82	79.6	5.34	123.5	344.4	1.01	16.0	1.49	16.5	197.8	0.53	38.8
29	5.30	77.2	251.2	4.51	22.8	7.93	215.2	452.8	0.61	10.9	6.16	55.0	746.1	3.47	10.5
30	2.77	54.1	216.2	3.44	28.6	5.29	196.0	321.0	0.70	13.7	6.72	137.3	606.8	3.88	10.5
31	2.34	9.5	100.3	1.38	72.4	4.83	147.6	341.1	1.05	15.1	2.76	18.2	152.5	0.56	46.7
32	2.21	29.2	105.9	0.50	55.9	8.70	204.3	495.2	0.84	10.5	2.77	29.4	246.9	0.40	29.4
SUM	2.34	34.0	180.8	2.76	36.7	4.73	141.8	344.5	0.92	15.2	3.82	47.8	422.5	2.12	17.4
WAG	3.39	61.8	220.9	2.27	27.0	5.30	165.3	362.8	0.96	13.9	4.26	56.5	465.3	2.02	15.6
33	0.40	8.6	21.5	0.02	244	0.43	15.8	57.0	0.03	106	0.63	4.4	61.7	0.05	125
34	4.14	108.1	258.4	0.24	20.1	6.31	246.0	629.3	0.25	8.6	6.03	17.3	739.4	0.59	11.3
35	4.50	118.5	248.9	0.34	19.7	4.38	201.2	566.8	0.39	9.9	2.96	5.1	457.0	0.41	18.7
36	2.41	70.2	151.9	0.19	32.9	2.29	95.1	368.3	0.26	16.9	3.49	59.5	372.7	0.30	18.6
37	1.41	35.2	163.8	1.00	39.7	2.47	101.1	275.6	0.29	20.1	2.22	20.8	347.5	0.63	22.9
38	1.00	11.7	174.0	2.81	45.4	3.22	102.3	268.7	0.39	20.2	2.43	26.1	387.5	1.18	20.4
39	0.98	9.0	235.8	5.02	35.1	4.19	115.7	304.2	1.28	17.6	3.18	30.3	409.1	2.17	19.0

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX D,CONTD

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

DENVER

	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID
	231	1973	FORD	TORI	351	232	1973	FORD	TORI	351	233	1973	FORD	STAT	400
MODE NO.	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG
1	9.01	266.5	1262.8	2.96	5.2	4.37	183.4	1150.0	7.43	6.3	8.29	272.4	1255.7	4.17	5.2
2	3.36	36.3	529.7	1.28	14.9	3.06	27.3	347.3	0.98	22.2	3.02	29.4	395.3	1.73	21.0
3	7.56	98.3	1214.3	2.50	6.4	6.50	108.0	1053.0	3.08	7.1	7.56	40.2	1426.3	5.76	5.6
4	4.78	86.1	749.6	2.00	9.9	6.09	67.0	737.4	4.24	9.4	4.61	86.4	467.0	2.77	8.2
5	3.41	62.0	698.7	3.72	11.0	5.92	67.0	663.5	6.52	10.6	4.50	88.6	728.3	5.06	10.1
6	1.43	14.9	242.9	1.06	32.8	1.84	14.6	178.0	0.67	42.9	1.53	9.2	187.8	1.51	42.9
7	9.32	473.5	822.7	2.08	6.2	10.38	288.3	788.9	5.54	7.6	7.60	360.2	614.2	3.50	5.8
8	1.29	16.1	231.9	0.88	36.4	2.39	19.2	230.1	1.08	37.3	2.25	9.8	203.6	0.51	38.6
9	4.67	131.3	671.0	3.24	9.9	5.23	40.2	636.6	6.24	11.4	5.33	271.2	667.3	2.36	7.6
10	1.38	16.5	233.3	0.72	33.7	3.13	24.5	225.0	1.03	32.5	2.38	13.0	238.5	0.57	32.6
11	7.12	270.0	776.3	2.76	7.3	6.95	256.1	722.1	4.98	7.7	6.27	385.6	683.6	2.31	5.8
12	1.77	21.5	261.9	0.84	29.5	4.67	27.8	238.5	1.10	32.8	2.42	16.7	253.8	0.60	31.0
13	6.67	300.6	779.0	2.61	6.9	6.07	150.1	774.5	9.44	8.6	6.27	377.1	468.6	2.06	5.1
14	1.32	20.9	245.0	0.60	31.5	3.21	25.0	218.8	1.13	33.1	2.12	12.1	210.5	0.51	33.0
15	2.77	32.6	372.4	0.70	20.5	2.57	31.0	282.5	0.44	28.6	2.11	26.9	291.0	0.60	26.9
16	7.70	82.0	1089.7	2.07	7.1	6.84	62.2	676.4	1.05	11.2	5.66	23.1	436.0	1.57	17.0
17	7.13	239.7	907.6	3.94	8.4	6.43	146.4	663.9	6.07	7.9	9.27	367.9	561.4	2.26	6.6
18	1.89	23.7	294.9	0.82	26.3	2.88	27.7	257.1	1.20	28.7	1.78	16.2	271.0	1.17	27.9
19	6.30	325.2	749.0	1.48	6.9	6.45	110.2	677.7	6.54	11.2	6.15	291.1	742.1	1.66	7.2
20	2.45	31.4	362.4	0.82	21.3	3.37	32.7	298.1	0.79	26.8	1.92	15.8	320.6	0.66	25.0
21	13.26	371.0	957.7	2.96	5.8	10.74	294.6	631.1	6.21	6.0	17.46	530.4	1077.8	3.12	4.6
22	1.77	21.0	301.2	0.57	26.1	3.47	28.3	233.1	0.67	30.7	2.27	12.8	229.4	0.63	36.5
23	6.21	124.5	1003.2	4.12	7.3	6.70	146.5	703.2	5.63	8.6	6.08	97.2	1277.2	0.16	6.3
24	6.50	225.7	815.8	2.67	7.5	5.44	84.1	607.7	6.36	11.7	6.16	262.1	715.6	2.56	7.0
25	1.39	16.9	226.2	0.54	33.5	3.15	25.6	215.0	0.68	33.6	2.21	10.7	170.1	0.36	49.0
26	3.88	49.1	560.1	1.21	13.7	3.72	52.0	387.6	0.72	20.8	3.11	37.2	274.8	0.81	13.0
27	6.19	153.5	755.8	3.69	9.7	7.59	149.5	664.1	6.25	9.6	7.43	109.3	617.9	2.57	6.6
28	2.91	30.7	292.5	0.71	25.4	2.93	29.6	170.9	0.72	49.1	2.19	12.4	224.4	0.55	35.0
29	7.09	144.3	1088.8	3.88	6.7	6.21	134.1	663.1	2.66	9.6	5.81	126.2	1140.9	3.69	6.7
30	7.39	328.4	728.7	2.36	7.0	6.32	115.9	630.0	9.57	10.7	6.46	318.5	415.3	3.16	6.6
31	1.31	20.0	260.3	0.73	30.0	2.73	26.2	217.4	0.24	33.2	2.52	11.4	163.1	0.42	41.6
32	3.73	47.9	534.6	0.98	14.3	3.24	44.3	361.2	0.60	19.8	3.33	36.9	394.3	0.69	19.0
SUM	4.01	100.2	509.6	1.91	13.1	4.69	80.8	469.0	3.22	14.8	4.38	113.0	541.4	2.21	12.3
AVG	3.94	106.2	542.9	1.74	12.3	4.73	84.6	506.6	3.10	13.6	3.94	116.4	599.1	1.75	15.2
33	0.88	10.0	136.5	0.13	57.3	0.70	3.2	86.6	0.11	94.6	0.67	2.3	124.1	0.20	77.9
34	13.80	144.6	1763.6	2.66	4.9	7.67	44.7	1049.8	1.09	7.8	7.27	15.0	1318.7	2.05	6.5
35	5.50	83.8	830.4	1.13	9.1	3.90	31.8	547.8	0.61	14.8	2.70	10.3	678.5	0.84	12.6
36	3.71	54.1	587.9	0.83	13.0	2.57	20.4	389.9	0.42	20.6	2.12	7.6	463.3	0.52	18.4
37	2.16	25.9	311.3	0.63	24.7	2.31	29.5	365.0	0.77	21.2	2.05	14.4	346.9	1.40	24.6
38	2.33	27.9	344.7	2.32	22.4	2.93	42.5	387.0	1.69	19.2	2.33	14.7	393.2	5.10	20.9
39	2.76	43.5	384.8	2.47	19.2	3.88	72.9	470.2	2.61	16.9	2.59	29.5	437.1	2.48	18.1

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX D,CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

DENVER

	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID
	034	1973	FORD	LTD	400	035	1973	MAZD	RX2	70	036	1973	MERC	MARQ	429
MODE NO.	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG
1	6.95	148.6	930.4	3.01	7.5	18.34	137.2	553.1	1.62	10.7	6.09	212.2	893.2	3.60	7.1
2	2.11	39.1	347.1	0.63	21.4	2.52	11.7	402.9	0.37	20.7	11.33	98.5	291.0	0.47	18.4
3	5.96	101.6	1212.8	2.68	6.4	7.12	93.3	1045.6	1.32	7.3	13.91	308.6	888.2	1.78	6.3
4	2.67	105.9	871.6	2.32	8.5	6.48	43.1	581.1	1.72	13.7	4.57	121.0	894.4	1.68	9.4
5	3.11	83.4	654.5	2.96	11.2	5.28	51.1	399.8	2.15	17.9	3.76	99.7	456.4	2.47	14.2
6	1.07	13.3	183.7	0.64	42.7	1.40	6.6	216.3	0.30	38.4	8.23	41.1	143.5	0.27	37.9
7	5.64	333.8	785.2	3.96	6.9	12.66	133.6	369.3	1.10	14.3	8.31	390.0	687.9	1.40	6.7
8	1.34	17.3	251.5	0.41	30.6	0.49	4.6	231.6	0.42	36.7	9.59	37.3	172.6	0.47	33.9
9	4.36	214.4	648.3	2.01	8.9	9.33	115.7	346.6	1.38	15.4	4.50	98.3	605.0	4.04	11.5
10	2.21	19.4	280.1	0.47	27.4	1.04	4.2	264.2	0.52	32.4	9.42	47.5	198.8	0.50	29.3
11	5.87	352.8	816.8	2.36	6.4	13.51	209.3	381.9	2.72	11.8	8.25	397.8	657.6	1.49	6.8
12	3.05	25.4	303.9	0.55	25.1	1.37	4.5	305.4	0.50	28.0	11.26	48.2	188.6	0.59	32.3
13	6.65	286.4	738.2	2.22	7.3	13.76	192.2	436.1	1.13	11.4	11.97	331.8	689.5	1.97	7.1
14	1.98	24.5	279.5	0.48	27.4	0.99	3.3	270.8	0.64	31.8	10.10	42.0	179.4	0.52	32.0
15	1.94	43.6	229.2	0.49	29.2	1.42	5.4	329.3	0.25	25.9	10.40	70.2	198.4	0.30	26.0
16	6.30	131.6	626.8	0.62	10.4	3.09	12.7	800.0	0.48	10.7	25.72	225.5	535.9	0.26	9.1
17	6.68	362.7	824.0	1.81	6.3	12.60	182.3	495.3	1.17	10.8	6.96	218.8	1012.7	3.06	6.4
18	1.37	24.1	256.7	0.57	29.7	1.34	4.9	279.2	0.27	30.5	9.27	51.9	184.1	0.35	33.1
19	6.29	358.5	658.0	1.43	7.6	15.60	190.6	423.6	0.72	11.5	6.55	159.8	660.4	1.47	4.5
20	1.73	28.2	293.8	0.52	25.8	1.34	5.1	327.4	0.30	26.1	9.93	44.5	203.3	0.45	26.4
21	8.27	358.2	926.2	4.47	5.9	18.70	184.6	373.0	0.61	12.3	11.79	404.8	672.4	1.92	6.8
22	2.04	28.5	326.8	0.48	23.5	1.57	10.3	355.1	0.43	23.6	12.11	55.3	196.6	0.54	27.8
23	5.09	167.6	1016.5	2.57	6.8	7.06	78.0	679.8	1.45	10.8	8.00	171.9	813.7	2.88	7.0
24	5.52	218.2	809.7	1.58	9.1	13.65	178.9	331.2	0.66	13.5	5.54	106.0	640.8	3.62	11.3
25	2.26	23.9	223.8	0.41	33.0	0.98	3.8	274.1	0.60	31.3	9.11	39.6	170.1	0.51	34.0
26	2.90	61.2	307.9	0.50	21.5	1.92	7.0	423.1	0.31	20.2	11.40	96.7	240.2	0.38	18.8
27	5.80	263.1	746.8	1.71	7.5	9.37	124.4	416.4	1.39	13.8	16.62	306.0	605.8	2.14	7.4
28	1.78	24.9	258.1	0.48	29.3	0.97	5.0	273.6	0.46	31.2	8.84	56.7	196.5	0.57	26.3
29	4.81	145.6	951.4	1.97	7.4	5.15	81.4	701.6	1.60	10.5	7.74	156.5	788.2	2.06	8.4
30	5.22	294.8	725.5	1.86	7.4	12.36	176.0	398.5	0.74	12.4	6.57	202.9	640.9	3.11	9.1
31	2.34	27.9	213.2	0.42	33.6	0.90	4.5	277.7	0.54	30.9	7.25	37.7	160.4	0.55	33.6
32	2.91	60.6	287.2	0.54	22.7	1.74	6.0	363.7	0.25	23.4	10.70	99.2	280.3	0.42	18.9
SUM	3.39	111.7	488.0	1.57	13.2	4.42	54.4	370.9	0.81	18.9	7.02	131.8	417.6	1.35	13.7
BAG	3.82	124.4	558.0	1.35	11.6	4.95	73.5	388.2	0.70	17.1	7.59	146.9	447.8	1.49	12.6
33	0.72	16.6	77.3	0.07	84.1	0.20	8.4	66.1	0.02	111	1.93	27.2	69.5	0.10	74.9
34	7.58	152.4	932.2	0.80	7.4	0.72	38.9	914.2	0.33	9.1	27.63	320.1	724.4	0.64	6.7
35	3.66	70.9	486.1	0.40	14.6	0.59	13.3	711.0	0.40	12.1	17.95	213.1	386.0	0.28	11.4
36	2.13	28.0	403.4	0.39	19.5	0.56	8.8	479.5	0.27	17.9	10.24	150.6	273.3	0.19	16.4
37	1.77	27.8	318.5	0.98	24.1	1.39	13.6	338.2	0.38	24.4	3.61	96.2	288.5	0.40	19.8
38	1.99	27.7	360.5	4.01	21.6	0.19	4.3	321.0	0.58	27.0	2.45	63.3	341.0	0.57	19.8
39	2.21	56.7	433.3	1.29	16.8	0.18	4.8	367.2	1.18	23.6	3.16	69.3	383.2	1.66	17.7

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX D,CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

DENVER

```
           VEH  YEAR  MAKE  MODL  CID        VEH  YEAR  MAKE  MODL  CID        VEH  YEAR  MAKE  MODL  CID
           ---  ----  ----  ----  ---        ---  ----  ----  ----  ---        ---  ----  ----  ----  ---
           040  1973  PLYM  FURY  360        041  1973  PONT  LEMA  350        042  1973  PONT  CATA  400
MODE
NO.      HC    CO    CO2   NOX   MPG       HC    CO    CO2   NOX   MPG       HC    CO    CO2   NOX   MPG
---------------------------------------------------------------------------------------------------------
 1      9.82 169.2  858.6  5.88  7.7      8.44 178.0  387.0  1.15 12.7      4.74  59.2  957.4  9.71  8.3
 2      3.54  88.0  357.3  0.84 17.4      9.03 209.4  552.9  1.40  9.7      3.12  19.9  342.6  2.10 23.1
 3      5.90 215.0  920.3  3.17  7.0     16.12 302.6  763.0  2.17  6.9      5.76  73.0 1112.9  6.51  7.1

 4      3.37  75.6  682.4  5.88 10.9      6.44 140.2  507.1  1.52 11.9      2.98  20.7  868.9  7.74  9.8
 5      3.16  71.7  543.7  6.11 13.3      4.17  80.9  448.2  3.34 15.1      2.94  15.7  320.7 10.27 11.6
 6      2.01  47.9  175.9  5.82 34.5      4.11  91.8  415.7  1.93 15.5      5.05   4.1  197.4  1.03 39.2

 7      6.74 374.0  602.5  3.11  7.3      5.02  80.5  471.9  4.42 14.4      5.22 177.6  830.2  6.37  7.6
 8      2.26  30.1  229.2  1.03 31.2      4.86 140.6  487.9  3.27 12.1      5.67  14.6  314.5  1.90 25.0
 9      3.65 116.9  560.9  6.24 11.7      5.61 103.5  466.6  3.40 13.7      3.15  33.5  614.5 10.10 13.1

10      2.08  47.5  248.2  1.64 26.9      5.87 112.9  507.7  3.20 12.6      4.53  11.8  314.9  2.89 25.5
11      6.95 292.8  635.6  4.34  7.9      7.26 181.6  511.5  2.50 10.8      5.15 132.7  727.7  6.63  9.3
12      2.20  52.9  250.2  1.38 26.1      7.60 188.6  626.0  3.60  9.4      5.46  15.5  338.6  2.17 25.3

13      6.06 256.6  661.0  5.05  8.1      7.81 212.3  558.2  2.42  9.7      6.52 154.6  811.4  6.26  8.1
14      1.95  36.8  217.1  1.71 31.6      5.53 155.0  440.1  2.24 12.7      4.74  10.9  266.2  1.74 29.5
15      2.61  66.8  232.4  1.42 25.6      9.17 136.0  422.0  1.69 13.3      3.98  18.7  318.3  1.66 25.7

16      7.12 290.9  611.6  2.53  8.6     26.01 410.1  845.0  1.82  5.6      5.87  55.5  836.6  3.28  9.6
17      6.52 166.0  755.1  6.48  8.6      7.55 198.2  429.4  1.59 11.6      8.22 112.2 1004.3  6.73  7.6
18      2.37  52.5  213.7  1.31 29.2      6.12 160.5  498.3  1.60 11.5      4.42  12.4  226.7  1.85 34.1

19      5.87 110.7  656.4  6.16 10.5      6.32 138.6  421.0  1.75 13.5      5.28  51.1  860.6  7.66  9.3
20      2.73  68.5  239.0  1.19 25.0      7.79 186.4  579.7  1.76  9.8      4.76  17.0  252.6  2.21 30.1
21     10.43 362.1  712.9  3.88  6.7      8.49 268.5  334.1  4.54 11.3      9.46 204.2  968.6  6.53  6.3

22      2.49  56.6  221.6  1.43 28.1      8.14 187.6  556.6  2.66 10.1      5.10  21.5  236.1  2.65 31.6
23      6.76 114.2  876.7  6.58  8.3     12.65 248.7  652.4  2.12  8.2      6.06  41.9 1146.5  7.93  7.0
24      5.82 121.6  584.3  5.44 11.2      5.92 163.9  455.3  2.20 12.1      4.37  55.1  729.0  6.52 10.7

25      2.66  44.5  179.2  1.56 34.5      5.41 146.0  437.3  2.33 13.0      4.36  13.0  242.4  3.65 31.4
26      3.69 119.1  321.5  0.56 17.1     13.38 197.1  597.9  2.09  9.3      4.91  23.5  292.6  2.40 25.7
27      6.46 164.5  617.0  5.35  9.9      7.61 233.3  510.5  1.82  9.8      5.37 104.8  798.3  7.51  9.0

28      2.34  56.7  225.4  1.28 27.6      7.50 156.1  468.8  1.95 12.1      4.81  19.2  236.1  2.48 31.3
29      6.17 129.1  821.7  5.06  8.5     12.82 230.4  610.0  1.84  8.8      5.93  59.6  868.6  6.61  8.9
30      7.50 225.8  591.9  4.78  9.2      6.63 169.6  465.3  2.02 11.8      5.43 135.9  754.1  6.76  9.0

31      2.27  44.4  202.6  1.23 31.7      6.23 183.4  451.8  1.82 11.7      5.99  17.1  232.6  4.73 31.6
32      3.60 118.1  328.9  0.50 16.9     15.29 231.5  594.3  2.19  8.8      4.20  27.8  288.1  2.49 25.7

SUM   3.92 100.1  442.1  3.73 14.5      6.06 142.5  474.0  2.76 12.4      3.95  43.4  521.4  5.43 14.7
WAG   4.03 116.3  547.6  3.18 11.9      6.81 182.5  513.2  2.50 10.8      4.13  53.5  560.0  5.33 13.5

33      0.83  31.4   66.1  0.07 64.3      2.10  46.1   51.4  0.03 68.0      0.45   2.8   70.6  0.08  116
34      9.53 346.2 1053.3  0.83  5.5     26.24 575.4  665.5  0.30  5.4      5.18  33.9  847.2  0.63  9.7
35      4.64 173.1  531.8  0.42 10.8     11.58 282.7  335.5  0.13 10.7      2.64  16.2  508.2  0.58 16.4
36      3.14 120.8  371.8  0.30 15.5      6.43 178.0  353.9  0.29 13.6      1.95  13.6  506.8  0.88 16.6

37      2.53  53.6  316.3  0.73 21.7      3.49  76.3  346.6  1.37 18.6      1.97   4.7  383.1  2.10 22.4
38      2.25  17.3  383.8  4.43 21.2      3.46  81.4  393.8  1.78 16.7      1.95   8.5  419.5  4.00 20.2
39      2.61  27.4  433.4  6.41 18.3      3.73  77.9  498.7  4.87 14.0      2.05   7.5  459.9  7.89 18.6
```

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX D.[illegible]

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

DENVER

VEH	YEAR	MAKE	MODL	CID
045	1973	FORD	COMP	170
044	1973	VOLK	BEET	97
049	1973	VOLK	STAT	318

MODE NO.	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG
1	4.21	54.6	327.5	2.23	20.8	3.57	85.4	443.3	3.80	15.3	5.43	113.4	312.0	3.36	17.5
2	4.31	61.0	424.2	2.82	16.6	1.36	24.0	135.0	1.13	51.2	4.33	73.7	473.9	2.66	17.6
3	6.76	94.2	577.6	2.32	11.9	5.21	91.1	447.9	1.33	14.6	7.94	152.5	511.2	2.31	11.9
4	3.36	53.1	357.1	2.26	19.7	1.95	28.0	384.3	3.45	19.7	3.34	48.2	325.3	2.66	21.3
5	2.61	40.5	346.9	3.57	21.9	1.75	42.6	386.5	5.26	19.8	2.61	42.6	339.0	3.42	21.3
6	2.20	23.0	306.4	3.12	25.4	3.62	13.5	90.4	0.45	32.1	2.14	41.3	260.6	2.31	26.7
7	3.22	36.9	352.6	3.45	18.3	2.96	67.0	385.0	4.96	18.5	3.11	45.6	323.6	5.57	21.1
8	2.37	54.4	342.0	5.41	29.3	2.51	38.2	88.7	0.79	56.9	3.14	35.6	310.4	3.13	23.6
9	3.20	66.5	355.0	4.19	14.2	1.76	59.5	336.3	4.50	20.3	4.12	43.6	315.2	5.10	23.0
10	2.90	45.6	347.6	4.24	20.7	1.66	23.3	66.5	0.76	65.3	3.64	25.3	326.0	4.12	23.6
11	4.26	132.0	355.9	2.88	15.0	3.48	44.6	126.5	4.26	16.9	4.47	89.2	363.4	4.07	19.3
12	4.23	42.2	412.5	4.40	19.0	2.61	24.7	77.6	0.90	71.0	3.51	38.6	415.5	5.27	19.8
13	4.85	135.2	383.7	3.04	16.5	4.82	42.7	359.4	4.41	17.3	5.35	41.2	422.0	1.20	15.7
14	3.40	86.7	310.3	4.12	20.9	2.14	71.9	91.4	0.73	46.9	2.81	27.4	294.3	3.62	25.3
15	5.10	107.1	287.3	2.13	16.8	1.76	14.9	80.1	0.81	75.0	4.54	50.6	281.3	2.31	23.3
16	11.44	269.7	528.9	2.05	9.4	3.28	73.2	182.0	0.81	31.9	12.14	116.7	536.2	0.64	11.7
17	4.25	100.1	284.6	1.64	19.5	3.82	121.9	433.3	4.70	14.0	3.80	37.9	323.3	4.05	15.6
18	3.66	70.2	375.3	2.95	17.9	1.06	25.6	127.0	0.74	52.0	2.54	35.6	337.9	3.47	22.1
19	3.94	101.6	281.9	2.36	19.5	3.37	73.9	385.4	3.33	17.3	3.37	43.9	248.4	3.99	21.7
20	4.32	78.9	456.2	3.67	15.9	1.17	18.0	48.6	0.98	60.0	3.26	45.4	393.8	[illegible]	[illegible]
21	4.74	143.6	353.4	2.54	14.9	5.73	111.7	425.7	3.49	17.2	4.14	44.5	334.8	[illegible]	[illegible]
22	4.37	136.7	371.4	4.24	16.1	1.97	35.9	93.6	1.60	57.3	4.03	66.7	367.6	5.31	19.7
23	4.84	145.6	452.6	2.61	12.6	2.34	42.3	452.0	4.60	18.4	4.20	104.0	431.0	4.21	17.0
24	3.94	154.1	322.4	2.47	17.5	2.76	71.3	357.4	4.60	19.4	3.13	47.4	315.2	4.63	21.4
25	3.44	55.8	317.2	4.14	20.6	1.14	18.2	96.1	1.79	48.2	3.32	32.0	288.6	3.32	25.5
26	7.26	152.2	427.2	2.84	13.0	2.34	25.1	332.4	1.67	52.6	4.60	61.6	410.2	3.16	16.6
27	4.80	136.5	368.7	2.70	14.8	3.79	116.4	470.4	4.59	15.4	3.63	73.4	393.6	4.04	19.5
28	2.56	36.0	348.4	4.84	19.3	1.49	21.4	85.3	0.74	71.2	4.66	37.4	311.7	3.73	23.1
29	4.23	125.2	388.7	2.13	15.7	2.04	76.6	431.4	4.13	16.6	5.26	115.4	385.5	3.18	15.5
30	4.19	120.3	327.7	2.36	16.7	3.25	113.3	451.1	4.37	14.2	3.43	71.9	329.3	5.24	19.6
31	3.84	73.1	339.0	4.90	19.0	2.06	15.2	76.2	0.77	63.2	3.16	36.6	336.2	4.04	23.6
32	4.56	166.6	445.0	3.38	12.1	1.73	17.5	136.3	0.99	43.7	4.45	77.2	391.5	3.21	16.3
SUM	3.39	67.5	343.9	4.30	19.3	2.15	38.1	239.5	2.92	27.9	2.70	37.4	313.3	3.82	23.3
WAG	3.91	93.6	352.9	3.92	17.3	2.22	58.0	228.6	2.61	27.2	3.90	55.2	332.7	4.33	20.7
33	0.38	2.5	35.5	0.07	219	0.25	4.6	21.9	0.02	296	0.91	19.4	25.7	0.04	171
34	3.79	25.0	458.2	0.51	17.3	2.93	55.6	318.3	1.29	21.5	4.62	177.6	440.7	0.26	10.1
35	2.60	16.2	315.7	1.08	25.4	1.47	23.2	214.1	0.46	36.8	2.59	47.0	355.7	0.35	16.9
36	3.93	77.4	236.1	0.55	24.0	1.17	20.0	194.0	0.72	36.7	1.02	16.9	246.3	0.41	32.1
37	2.13	40.9	253.4	0.89	27.4	1.14	22.9	205.8	1.79	36.2	0.65	6.6	218.0	1.13	36.5
38	1.36	19.4	315.1	3.22	26.4	1.06	23.8	205.1	3.07	36.1	0.56	3.2	249.4	2.60	34.6
39	2.30	22.1	363.7	4.80	22.0	1.15	33.3	234.7	4.27	30.5	0.51	2.3	297.4	3.52	29.3

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX D,CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

DENVER

	VEH 044	YEAR 1972	MAKE BUIC	MODL SKYL	CID 350	VEH 047	YEAR 1972	MAKE BUIC	MODL CENT	CID 455	VEH 049	YEAR 1972	MAKE CHEV	MODL VEGA	CID 140
MODE NO.	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG
1	6.81	185.1	441.5	0.74	11.8	5.02	101.8	797.8	2.95	9.1	1.45	42.9	333.6	1.12	23.6
2	7.20	199.1	514.7	0.95	11.5	6.16	80.1	789.7	3.71	9.5	2.47	66.1	362.3	0.91	19.6
3	12.10	290.8	788.1	1.20	6.9	8.36	117.9	1325.5	4.11	5.8	3.84	52.0	473.7	1.21	15.7
4	4.83	136.3	455.7	1.02	13.0	3.15	57.1	786.5	3.73	10.2	1.21	50.0	373.3	0.73	19.4
5	4.10	123.9	390.3	1.47	14.8	3.28	57.8	583.0	5.56	13.0	1.28	35.3	306.1	1.88	24.9
6	3.66	112.9	357.7	1.41	16.2	3.06	49.8	529.4	4.03	14.8	1.15	29.6	195.6	1.46	38.3
7	6.21	215.8	371.8	1.08	12.2	5.66	249.0	552.1	3.26	9.2	1.96	49.9	256.4	1.46	25.4
8	4.89	165.5	391.2	1.82	13.3	4.73	122.0	560.8	4.51	11.6	1.66	63.9	226.9	1.16	26.4
9	5.67	170.8	378.2	1.66	13.0	3.67	102.9	353.7	5.00	16.8	1.54	49.3	235.1	1.52	26.3
10	5.17	129.6	413.6	2.15	14.7	2.71	62.0	615.7	4.72	12.3	1.47	36.4	222.0	1.30	32.3
11	6.27	262.4	402.9	0.88	11.6	7.03	342.9	611.2	1.85	7.6	2.81	87.3	269.0	1.30	14.7
12	6.26	193.2	479.2	2.72	11.1	4.19	115.6	289.3	5.27	19.3	2.51	62.6	298.9	1.75	22.6
13	4.14	309.9	436.9	0.98	9.4	6.88	317.1	653.3	2.70	7.6	3.44	109.6	275.1	1.25	19.3
14	2.77	146.1	382.2	1.91	14.7	3.25	95.0	422.6	4.14	23.3	1.81	55.7	218.3	1.13	29.5
15	7.39	125.5	413.1	1.16	14.0	3.42	51.4	127.6	2.84	41.5	6.33	53.0	256.6	0.62	24.4
16	15.34	287.9	648.0	1.50	6.3	6.30	79.3	189.6	3.90	28.5	6.51	61.6	519.4	1.04	11.4
17	6.20	237.8	388.5	0.70	11.7	4.67	181.9	416.5	2.05	12.4	2.30	66.1	261.7	1.23	23.6
18	5.04	166.3	434.8	1.02	12.9	4.06	132.7	312.1	3.05	16.8	2.11	71.9	309.1	1.00	20.2
19	5.37	165.8	391.1	0.88	13.3	3.60	49.5	241.0	2.32	21.7	2.16	35.5	269.5	1.71	26.7
20	6.96	227.4	474.0	1.02	10.4	5.24	173.8	411.1	3.42	12.7	2.30	69.6	365.9	1.23	19.4
21	11.57	380.4	412.9	0.53	8.5	8.72	357.2	598.1	1.69	7.5	3.24	76.6	211.5	0.47	24.8
22	6.43	236.4	454.7	1.66	11.4	4.55	148.2	719.0	3.59	9.2	2.31	116.6	259.9	0.42	24.5
23	13.37	234.7	602.5	1.61	8.8	4.92	111.5	944.9	4.98	7.8	3.70	43.4	336.2	1.53	19.5
24	5.35	205.2	371.6	1.38	12.5	5.81	195.6	417.6	2.86	11.9	1.75	57.8	241.3	2.17	25.5
25	4.62	161.2	374.7	1.65	13.8	2.92	108.3	570.6	3.44	11.8	1.44	49.9	231.7	1.14	28.2
26	11.77	201.7	551.5	1.41	9.8	4.51	72.3	851.5	3.59	9.1	6.66	76.3	325.6	0.66	19.0
27	6.64	289.2	402.8	0.73	10.1	7.66	317.9	622.9	2.31	7.7	2.86	76.3	294.6	2.03	21.7
28	6.30	166.9	397.4	1.56	13.3	2.95	83.6	661.5	3.81	11.1	1.61	51.0	244.6	1.17	26.8
29	4.62	197.7	547.9	1.46	10.0	4.10	86.8	898.7	4.43	8.5	2.62	57.1	333.0	1.48	22.6
30	5.70	232.3	366.1	0.99	11.8	6.66	288.7	545.2	2.54	9.2	1.62	63.2	242.8	2.03	22.4
31	5.56	198.2	395.4	1.53	12.3	3.62	145.2	607.3	3.59	10.5	1.65	66.5	243.1	1.23	25.2
32	11.92	237.1	557.7	1.31	9.2	5.18	41.5	906.5	4.53	8.3	6.24	80.6	365.6	0.98	17.3
SUM	4.95	157.1	411.3	1.72	13.2	3.61	126.5	578.3	4.05	11.7	1.74	48.8	250.1	1.49	26.7
WAG	6.74	227.1	425.1	1.23	11.0	4.56	179.0	654.6	3.59	9.3	2.37	72.6	263.5	1.33	23.1
33	0.77	21.1	67.6	0.03	86.0	0.57	5.0	136.5	0.21	60.7	0.33	5.6	26.1	0.01	282
34	8.82	261.5	800.4	0.36	7.2	5.81	55.9	1546.4	2.12	5.4	4.25	75.4	767.9	0.93	9.9
35	5.73	213.8	1116.0	0.42	6.0	2.36	19.9	883.1	1.39	9.8	0.97	19.6	462.7	0.32	17.9
36	4.40	194.7	499.4	0.43	10.8	0.83	6.7	479.7	2.09	9.9	0.65	8.8	267.1	0.34	31.4
37	2.43	62.9	329.1	0.70	20.4	1.88	3.5	479.7	4.41	18.1	0.66	7.6	171.4	1.24	47.9
38	2.54	68.5	341.2	1.65	19.4	1.71	5.9	532.4	10.00	16.2	0.94	26.3	162.7	1.72	39.1
39	2.38	60.6	405.5	3.52	17.5	1.29	13.1	590.8	13.27	14.4	0.89	31.3	233.1	1.99	31.1

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX D,CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

DENVER

VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID
349	1972	CHEV	NOVA	250	350	1972	CHEV	NOVA	307	352	1972	CHEV	IMPA	350

MODE NO.	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG
1	6.64	133.0	408.1	1.78	15.0	9.04	135.1	572.0	1.49	11.8	7.69	131.0	618.8	0.68	11.0
2	6.39	147.7	505.5	1.21	11.7	7.77	115.7	581.8	1.42	11.1	5.18	67.1	760.8	0.68	9.8
3	3.95	136.3	784.1	1.57	8.6	11.78	127.0	1116.4	2.15	7.1	8.81	152.9	1190.3	5.75	7.0
4	3.72	84.0	351.7	1.16	19.1	8.38	111.0	419.3	1.94	15.4	3.66	33.5	444.0	0.68	11.8
5	2.37	50.4	278.8	2.24	24.0	8.47	133.5	383.0	1.88	11.7	3.64	36.8	541.3	7.45	15.8
6	2.18	45.9	285.1	1.74	23.8	8.03	92.4	417.2	2.71	15.3	2.80	31.3	528.4	5.88	15.7
7	2.28	39.3	278.3	2.84	24.1	8.13	163.7	424.2	2.64	12.0	8.56	163.1	548.3	4.13	11.3
8	2.37	73.5	315.7	3.22	23.2	5.44	109.9	328.2	1.61	17.1	8.13	85.1	559.8	8.57	12.8
9	2.24	47.5	310.7	5.23	23.9	5.01	47.1	365.7	2.04	17.1	9.28	112.8	513.8	8.44	12.8
10	2.44	39.1	345.2	3.85	23.1	5.18	51.7	354.0	2.13	18.4	6.38	92.2	508.0	6.88	14.0
11	3.41	43.7	345.3	5.10	23.0	7.18	140.9	419.2	2.14	12.4	6.76	132.1	515.4	3.58	[illegible]
12	3.33	38.1	473.7	6.30	18.3	8.41	121.0	433.2	2.10	13.4	5.28	68.3	440.4	7.26	13.0
13	3.92	44.0	438.1	4.37	19.3	9.12	158.5	444.7	2.77	11.8	8.81	171.7	573.8	4.84	11.1
14	2.50	33.3	347.9	4.84	23.7	5.18	91.7	336.7	1.71	17.8	3.84	88.3	489.3	5.51	15.6
15	5.73	62.8	412.9	1.91	17.1	8.77	137.5	418.7	1.24	14.7	5.86	72.8	418.8	2.60	[illegible]
16	11.83	167.0	792.3	3.21	8.4	18.23	188.3	597.0	1.52	7.1	12.81	171.0	814.8	2.58	7.5
17	4.34	63.9	324.2	1.87	21.2	8.77	153.5	426.8	1.41	12.7	5.12	77.0	499.0	8.78	13.9
18	3.24	59.3	366.2	2.82	19.8	8.45	170.0	371.2	1.14	14.7	3.85	58.5	508.3	6.47	[illegible]
19	3.62	51.4	293.2	2.36	23.1	7.81	135.3	387.6	1.13	15.0	4.81	88.5	445.1	3.88	15.8
20	3.82	88.0	439.0	2.35	19.2	7.81	137.1	436.1	1.28	13.2	4.88	88.8	470.7	4.57	13.7
21	4.27	96.1	346.2	3.47	17.3	10.55	221.7	428.9	1.86	11.2	5.82	178.9	508.8	8.08	[illegible]
22	3.75	47.0	417.7	3.56	15.2	7.64	128.0	423.7	1.15	14.3	5.84	48.1	420.0	[illegible]	13.6
23	6.13	113.7	532.9	5.31	12.1	10.37	136.2	573.8	1.43	10.8	5.76	73.5	573.8	7.10	13.4
24	3.03	80.4	355.8	4.71	19.3	7.09	160.8	433.7	2.09	13.4	3.80	81.7	513.1	5.28	13.8
25	2.33	37.3	341.9	4.21	21.8	5.28	45.9	335.9	1.56	17.8	5.71	55.1	498.0	6.43	14.8
26	6.38	115.1	572.0	2.87	13.5	8.98	121.2	519.2	1.22	12.7	8.41	66.9	467.1	4.28	13.4
27	3.94	81.5	396.0	4.54	16.5	8.24	199.6	345.3	1.74	12.2	5.78	138.9	538.1	5.81	11.5
28	3.03	55.4	388.8	3.60	18.3	6.24	96.2	346.6	1.47	17.1	5.12	50.3	509.0	6.13	14.3
29	4.76	85.3	497.5	2.87	15.4	8.28	145.7	535.1	1.35	12.2	6.77	72.1	481.3	1.33	13.8
30	3.22	70.1	364.8	5.42	17.4	6.92	148.8	471.5	2.24	13.5	4.88	130.2	513.8	3.52	12.1
31	2.68	55.0	355.2	3.84	18.7	5.40	117.3	365.8	1.65	16.1	6.18	73.8	517.8	4.75	[illegible]
32	9.28	125.0	552.0	7.50	11.4	8.39	173.0	537.8	1.29	12.2	8.88	81.0	445.3	3.48	[illegible]
SUM	2.73	48.6	410.0	4.37	17.8	5.55	99.5	391.5	2.73	15.2	3.96	64.3	517.3	5.76	14.1
MAN	3.27	72.0	370.5	3.42	18.0	7.02	138.9	414.5	2.04	13.5	6.28	133.6	566.1	5.57	12.3
33	0.41	3.1	94.4	0.07	88.2	0.40	4.6	96.0	0.05	84.3	2.52	6.1	111.3	0.17	13.6
34	5.66	53.7	1070.0	5.41	7.6	6.29	45.7	1157.3	1.28	7.1	6.40	63.1	999.1	[illegible]	8.8
35	2.12	22.5	569.4	7.44	14.3	2.43	20.0	777.7	0.76	11.0	2.62	24.6	433.5	1.08	10.1
36	1.54	22.5	364.3	3.31	21.9	1.94	17.0	567.3	0.91	14.0	3.71	62.3	686.7	1.40	11.2
37	1.54	40.1	234.8	3.43	29.3	2.26	31.0	299.0	0.63	25.0	2.05	6.4	387.8	2.76	21.4
38	1.67	38.5	261.0	2.39	27.1	3.27	53.8	303.2	2.21	22.3	1.85	14.2	355.8	4.32	23.1
39	1.36	15.0	591.6	7.33	14.3	4.39	65.9	319.5	3.03	20.5	1.96	11.9	380.1	6.47	17.6

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX D,CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

DENVER

VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID
052	1972	CHEV	NOVA	350	053	1972	CHEV	IMPA	350	054	1972	CHEV	STAW	400

MODE NO.	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG
1	12,62	163,8	614,6	4,03	9,7	10,41	231,0	935,1	4,36	6,7	6,87	105,0	725,7	4,67	9,7
2	9,84	196,0	528,9	1,31	10,2	4,30	96,3	306,1	0,49	18,8	6,84	89,6	765,5	3,92	9,6
3	16,66	288,0	695,1	1,40	7,4	8,54	363,7	865,9	2,08	6,1	9,92	81,4	1280,9	6,07	6,2
4	6,86	188,3	435,8	1,53	11,7	4,23	113,2	751,4	3,80	9,6	4,54	45,0	713,6	6,20	11,1
5	5,60	114,8	420,9	3,41	14,3	4,45	167,7	602,1	2,63	10,1	3,90	62,7	622,0	6,90	12,1
6	5,24	95,5	390,3	2,17	15,9	3,63	33,9	204,8	0,52	32,9	4,09	52,4	498,7	6,29	14,9
7	8,21	164,2	381,7	1,90	13,3	9,27	306,8	746,3	2,22	7,1	6,48	218,6	575,2	5,31	9,4
8	6,78	173,[illegible]	417,8	3,15	12,6	7,18	36,3	*280,3	0,92	24,7	5,88	163,4	524,7	4,08	11,1
9	7,17	112,1	403,6	4,10	14,7	5,79	188,5	604,4	3,53	9,7	6,51	179,3	552,9	5,82	10,4
10	6,66	101,4	430,2	4,13	14,5	5,67	47,8	280,1	1,34	23,8	6,60	132,1	527,1	5,35	11,7
11	6,67	211,7	452,2	1,94	10,9	9,31	370,6	737,6	1,93	6,6	7,95	292,3	594,5	3,20	8,2
12	6,43	154,7	535,4	4,17	11,0	7,17	47,1	282,1	0,40	22,5	8,67	195,8	655,9	5,34	9,0
13	10,26	223,8	441,6	2,53	10,7	11,79	354,5	675,2	1,76	7,0	9,06	314,0	657,9	3,50	7,5
14	6,65	137,0	394,2	2,94	14,1	6,94	38,1	241,5	1,63	27,4	6,14	146,6	484,2	3,95	12,1
15	12,26	138,4	385,5	1,63	13,8	5,97	63,1	287,0	0,35	21,9	6,89	107,0	536,3	3,46	12,2
16	30,64	403,6	758,6	1,84	6,0	14,15	322,1	529,7	0,53	6,2	15,20	211,5	1163,3	3,60	5,7
17	9,59	206,4	369,1	2,21	12,3	10,96	340,4	671,8	1,71	7,1	6,42	234,9	566,4	2,93	9,7
18	7,46	165,5	426,8	1,58	12,5	7,01	64,9	259,1	0,60	23,2	6,19	138,2	605,6	4,24	10,5
19	10,77	185,5	365,1	1,70	12,5	10,48	254,1	613,9	1,66	8,5	5,20	136,3	555,6	3,38	11,3
20	9,71	203,1	488,1	1,58	10,6	6,32	80,2	372,2	0,66	19,5	7,25	152,0	708,2	4,69	9,2
21	10,61	264,3	405,5	1,16	10,4	13,77	428,9	814,8	2,36	5,8	9,43	381,3	595,2	2,04	7,3
22	9,36	201,8	431,0	2,81	10,9	8,63	70,5	179,1	0,63	28,0	9,55	252,6	572,7	2,93	8,9
23	12,88	174,1	568,5	4,48	10,1	8,76	212,2	442,1	4,54	8,8	10,46	188,3	881,6	6,91	7,3
24	6,71	160,1	410,5	2,70	13,0	9,07	317,7	594,4	1,27	7,9	5,61	169,3	555,0	3,96	10,6
25	6,17	128,4	418,8	3,20	13,9	9,45	39,5	178,8	1,06	32,8	6,36	156,9	488,7	4,05	11,7
26	14,61	170,7	541,1	2,05	10,4	9,52	128,6	250,1	0,41	19,7	10,84	160,0	755,9	4,62	8,5
27	9,44	202,3	432,0	2,22	11,4	9,91	326,3	665,9	1,64	7,3	7,57	263,0	619,3	3,71	8,5
28	8,21	139,8	438,4	2,89	13,0	6,64	71,5	190,9	0,81	26,8	7,22	148,2	547,5	4,04	11,0
29	12,50	201,3	519,7	2,17	10,1	9,10	278,8	444,6	2,22	8,8	8,17	134,4	420,6	6,16	8,4
30	7,96	218,0	394,7	1,37	11,6	9,14	374,7	698,9	1,62	6,7	6,74	265,1	566,1	2,48	8,8
31	7,43	190,4	398,5	2,10	12,3	10,18	42,2	155,2	1,13	34,6	6,94	198,4	503,7	3,65	10,6
32	17,31	212,4	516,2	1,84	9,8	9,50	117,9	236,2	0,40	19,7	11,44	204,4	760,7	3,66	7,9
SUM	6,64	126,4	430,8	3,64	13,6	6,48	141,0	453,1	2,01	12,8	5,94	148,9	474,8	5,04	12,2
BAG	8,40	188,8	451,9	2,86	11,4	6,91	183,6	511,5	1,65	10,8	6,85	205,3	605,5	4,19	9,3
33	2,31	51,6	128,3	0,59	41,0	1,04	33,4	52,6	0,04	61,8	0,66	4,0	108,0	2,21	76,2
34	10,20	165,8	786,1	0,53	8,2	9,35	294,1	494,0	0,46	9,0	6,87	37,4	1308,1	1,55	6,4
35	7,97	162,0	564,9	1,43	10,5	5,85	179,2	380,7	0,31	13,0	2,87	12,3	657,0	3,71	12,9
36	3,24	51,0	415,1	0,35	17,6	3,40	118,6	351,3	0,32	16,1	2,48	24,4	606,4	1,06	13,6
37	2,74	38,2	289,8	1,11	24,8	2,63	45,8	335,3	0,65	21,4	2,43	6,6	434,9	6,09	14,4
38	3,01	32,4	351,2	4,39	21,6	2,84	53,1	356,0	1,47	19,8	3,32	41,3	171,1	6,33	36,0
39	3,15	37,1	425,7	7,64	18,0	3,04	42,7	432,7	4,30	17,4	5,09	134,0	177,8	6,18	25,9

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1,85 CARBON TO HYDROGEN RATIO

APPENDIX D,CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

DENVER

	VEH 055	YEAR 1972	MAKE DATS	MODL SEDA	CID 97	VEH 056	YEAR 1972	MAKE DODG	MODL DART	CID 318	VEH 057	YEAR 1972	MAKE DODG	MODL POLA	CID 360
MODE NO.	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG
1	4.48	59.7	240.3	2.57	25.5	8.19	131.4	394.0	1.74	14.2	11.93	412.6	492.0	0.74	7.5
2	4.51	40.4	224.5	1.68	29.4	7.39	148.4	500.4	1.22	11.7	9.54	468.0	563.9	0.65	6.7
3	6.19	45.5	454.4	1.43	16.3	12.35	224.5	708.8	1.60	8.0	10.34	694.1	869.1	1.20	4.5
4	3.20	24.2	320.1	3.14	25.6	5.66	114.3	448.6	1.69	13.7	4.36	321.8	464.8	0.72	9.0
5	1.77	8.6	312.8	4.77	26.7	4.06	64.1	376.5	2.37	18.1	7.96	315.8	376.0	0.58	9.9
6	1.34	4.7	263.2	2.32	32.3	3.47	45.4	338.7	1.99	21.1	7.27	288.9	340.0	0.39	11.3
7	2.36	27.4	276.2	2.66	27.2	5.18	85.7	363.0	2.10	17.3	9.05	344.6	384.1	0.76	9.3
8	2.21	36.1	228.8	2.97	30.3	4.36	101.7	346.3	1.97	17.1	6.73	264.5	386.8	0.87	10.8
9	2.27	21.0	259.5	4.36	29.6	5.01	86.5	353.5	2.23	17.6	7.72	278.6	362.8	0.81	10.8
10	1.95	13.5	237.3	3.22	33.5	5.30	85.2	353.4	2.00	17.6	8.23	272.7	376.3	0.70	10.7
11	3.95	59.3	273.5	3.97	23.4	6.86	168.5	385.3	1.47	13.2	10.74	398.4	391.0	0.54	8.4
12	2.96	23.5	283.4	4.55	26.9	7.30	149.9	447.6	1.91	12.6	11.22	383.1	473.3	0.79	8.0
13	3.47	46.3	313.5	5.88	22.3	8.11	190.5	419.9	1.53	11.9	12.95	454.4	432.2	0.72	7.5
14	2.02	18.7	215.7	3.26	35.3	5.00	100.5	336.1	1.71	17.4	9.35	288.5	350.3	0.59	10.7
15	4.94	24.9	241.0	1.43	30.0	7.85	105.1	335.7	0.77	16.9	13.96	327.5	395.8	0.47	9.3
16	14.88	76.2	451.3	1.56	14.4	19.45	344.1	715.3	1.75	6.7	47.85	862.4	873.1	0.75	3.7
17	3.53	35.5	271.2	5.40	26.3	6.84	182.8	384.8	1.00	12.4	16.77	445.6	380.8	0.41	7.8
18	1.99	10.6	318.2	3.20	26.0	5.74	118.3	392.5	1.52	14.9	12.87	430.6	385.1	0.35	8.0
19	4.54	27.0	266.1	4.73	27.5	7.41	181.0	373.5	0.78	13.0	12.42	388.1	360.2	0.35	8.8
20	2.76	11.9	349.9	3.88	23.5	7.80	147.2	454.1	1.65	12.5	15.74	507.3	453.3	0.34	6.8
21	3.50	74.0	291.9	3.12	21.2	8.06	185.1	410.8	1.56	12.2	10.85	452.7	390.0	0.55	7.8
22	2.89	29.7	277.5	4.07	26.6	7.71	155.4	429.1	1.73	12.7	12.73	405.1	438.6	0.59	8.0
23	5.90	46.2	331.2	4.85	21.0	13.83	219.5	528.2	1.49	9.7	13.64	481.7	587.5	0.80	6.4
24	2.14	12.8	287.9	5.80	28.2	5.76	142.8	358.1	1.34	14.8	11.06	388.3	350.2	0.41	8.9
25	1.88	14.2	227.1	3.50	34.8	5.16	105.8	353.1	1.73	16.6	10.81	335.6	329.3	0.46	10.0
26	8.14	32.2	337.7	2.07	21.4	13.41	166.3	504.2	1.33	11.0	29.76	554.2	529.6	0.63	5.9
27	3.24	31.5	315.3	7.91	23.7	7.60	199.7	389.3	1.45	12.2	15.98	455.5	393.7	0.42	7.6
28	1.86	8.5	244.2	3.60	33.7	7.95	123.3	390.7	1.51	14.6	15.84	394.2	371.8	0.47	8.5
29	5.33	44.3	307.2	4.37	22.5	15.35	193.0	484.2	1.34	10.6	15.73	484.0	538.5	0.66	6.6
30	2.18	17.1	289.5	5.59	27.5	5.86	155.2	360.4	0.99	14.2	13.26	414.2	357.0	0.45	8.5
31	1.75	27.6	241.4	3.66	30.6	5.65	140.4	356.6	1.40	14.9	12.06	367.2	369.7	0.52	9.0
32	6.50	40.6	340.5	2.58	20.9	16.02	191.5	488.7	0.88	10.6	50.76	602.3	559.2	0.66	5.3
SUM	2.14	20.9	265.0	3.83	29.1	5.76	118.2	373.7	1.79	15.4	9.51	330.0	385.3	0.60	9.5
WAG	2.91	28.6	271.7	4.29	27.2	6.77	150.0	390.7	1.72	13.7	12.81	394.9	406.8	0.53	8.3
33	0.52	6.7	17.1	0.01	303	1.75	36.1	44.1	0.02	83.4	2.08	82.0	81.3	0.04	40.9
34	4.11	72.1	351.6	0.13	18.6	14.71	400.5	611.8	0.28	6.9	34.03	*****	1421.5	1.22	2.5
35	2.43	33.6	448.7	0.75	17.4	5.42	207.6	443.2	0.27	11.3	9.92	532.1	704.8	0.52	5.6
36	1.97	23.9	293.5	0.58	26.3	4.12	135.9	364.5	0.26	15.0	7.03	370.7	487.7	0.38	8.1
37	0.58	8.4	264.3	0.96	31.8	2.88	43.8	290.3	0.79	24.1	3.75	185.4	325.8	0.35	14.1
38	0.81	7.8	223.4	2.48	37.3	3.23	44.9	329.7	2.86	21.6	3.67	174.8	292.3	0.41	15.6
39	0.85	5.0	232.3	5.01	36.5	3.90	88.6	352.2	2.64	17.6	5.41	228.1	338.2	0.87	12.4

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX D,CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

DENVER

	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID
	058	1972	FORD	PINT	122	059	1972	FORD	MAVE	302	060	1972	FORD	TORI	351
MODE NO.	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG
1	3.43	32.5	316.5	4.66	23.4	4.83	45.6	545.3	7.26	14.0	7.69	144.3	662.5	4.36	9.7
2	2.85	37.3	362.5	4.34	20.6	4.76	38.1	545.1	3.91	14.3	6.42	76.2	597.2	4.07	12.0
3	5.09	65.0	508.0	3.48	14.2	7.34	100.6	806.7	2.81	9.0	13.08	126.7	1058.2	5.37	6.9
4	2.53	30.6	314.8	5.16	23.9	3.59	47.1	457.9	3.26	16.3	6.15	76.6	539.5	5.77	13.1
5	2.24	29.9	291.7	5.62	25.7	3.08	27.9	404.7	6.22	19.4	4.09	55.5	462.1	6.51	15.8
6	1.86	26.4	248.3	3.87	30.0	3.14	24.8	339.0	3.56	22.9	3.58	36.2	385.4	5.88	19.6
7	2.71	46.8	295.5	5.07	23.5	3.74	62.4	398.1	4.30	17.5	4.80	143.2	453.0	4.33	12.8
8	2.02	44.7	290.3	4.41	24.2	3.33	47.6	349.1	3.86	20.4	4.92	80.9	410.5	5.86	16.0
9	2.33	41.9	285.4	6.15	24.7	3.66	30.0	385.8	7.73	20.0	5.06	78.0	436.1	7.03	15.4
10	2.14	35.6	288.7	4.95	25.3	3.65	32.2	377.2	4.71	20.2	6.15	49.1	443.6	7.32	16.4
11	2.86	69.1	306.0	5.39	20.9	4.23	76.0	409.1	5.05	16.4	5.84	179.7	471.6	3.52	11.5
12	2.58	53.6	356.5	5.41	19.8	4.85	56.7	465.6	5.05	15.6	6.93	86.1	553.2	8.14	12.5
13	3.29	80.5	345.9	5.80	18.4	4.83	75.0	485.0	6.24	14.4	7.24	176.7	546.5	5.01	10.5
14	2.03	42.4	274.1	4.05	25.6	3.75	43.4	337.1	3.45	21.3	5.26	75.2	420.8	6.15	16.0
15	3.02	35.0	277.1	3.01	26.0	4.88	60.9	353.6	1.50	19.1	6.28	64.3	448.3	3.18	15.6
16	6.65	93.0	542.4	3.61	12.5	10.28	193.1	397.3	1.74	12.1	13.01	138.1	1007.7	3.55	7.0
17	2.75	61.7	300.0	5.23	21.9	4.20	85.8	395.6	4.76	16.3	5.10	95.5	490.4	5.56	13.5
18	2.30	38.9	310.8	4.53	23.4	4.30	58.2	402.4	3.29	17.5	4.64	71.7	482.5	6.12	14.6
19	2.59	47.6	273.3	3.76	24.9	3.68	69.8	337.9	3.90	19.3	4.99	100.1	424.9	3.48	14.8
20	2.74	42.8	364.9	5.30	20.1	5.48	69.2	460.8	3.70	15.1	6.00	79.2	551.3	6.37	12.8
21	2.85	81.8	356.8	5.85	18.0	5.25	167.3	402.8	3.25	13.0	6.37	181.8	491.0	3.66	11.1
22	2.60	48.5	321.5	4.65	21.9	5.31	82.0	426.2	3.67	15.5	7.53	109.3	518.5	6.03	12.4
23	4.15	54.7	426.7	5.96	16.9	7.21	128.3	503.0	3.06	12.2	10.39	121.5	695.5	7.72	9.7
24	2.24	58.2	282.4	4.84	23.3	3.67	57.9	369.4	5.90	18.8	4.84	116.1	432.2	4.51	14.1
25	1.98	44.1	268.7	3.94	25.8	3.73	46.0	355.1	3.33	20.2	4.61	72.4	406.2	5.62	16.6
26	4.51	54.0	381.0	3.94	18.5	7.75	123.6	494.7	2.01	12.4	7.72	89.7	655.6	4.09	10.8
27	2.73	69.7	326.5	6.49	20.0	4.23	79.1	403.9	5.06	16.4	4.90	122.4	510.8	6.08	12.4
28	2.36	38.6	291.6	4.62	24.7	4.57	57.8	382.2	2.82	18.2	6.22	70.4	447.6	5.14	15.4
29	3.82	59.6	396.7	6.19	17.7	6.22	127.0	722.3	2.86	9.4	12.58	112.6	667.0	6.76	10.0
30	2.35	59.4	305.0	5.94	21.9	3.43	61.8	374.2	6.57	18.4	5.64	139.2	431.8	4.15	13.3
31	2.04	43.5	284.0	4.52	24.7	3.77	48.7	377.6	3.34	19.0	5.47	86.5	411.6	5.08	15.7
32	3.95	47.3	380.1	4.51	19.0	7.16	95.1	525.4	2.22	12.7	8.74	104.3	636.3	3.73	10.7
SUM	2.18	37.0	297.2	5.36	24.5	3.61	53.0	389.2	4.11	18.3	4.98	81.5	468.6	5.91	14.5
MAG	2.44	60.0	301.9	5.02	22.0	4.18	69.4	404.5	4.44	16.8	5.77	110.0	491.7	5.72	13.0
33	0.26	2.7	34.2	0.02	225	0.68	18.0	67.9	0.05	90.3	1.31	15.7	105.7	0.17	66.0
34	3.07	18.0	464.2	0.22	17.7	8.34	239.2	882.0	1.49	6.9	12.74	98.4	1350.1	2.07	5.8
35	1.85	4.2	333.7	0.48	25.6	3.50	91.3	625.7	0.53	11.4	6.73	34.1	675.1	1.02	11.8
36	1.73	13.3	263.5	1.23	30.6	2.02	43.8	460.6	0.47	16.6	5.08	34.5	523.5	0.76	14.9
37	1.50	11.6	228.6	4.36	35.3	1.80	26.0	283.7	0.66	26.9	2.30	14.9	360.6	2.51	22.7
38	1.45	12.4	252.8	5.76	32.1	2.42	16.6	312.3	3.63	25.6	3.51	28.0	383.6	4.56	20.2
39	1.51	16.6	286.9	7.03	27.9	2.67	29.6	357.2	5.40	21.5	3.21	50.5	427.6	4.50	16.7

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX D,CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

DENVER

	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID
	061	1972	FORD	STAR	351	062	1972	FORD	LTD	400	063	1972	FORD	THUN	429
MODE NO.	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG
1	5.16	158.6	491.0	3.07	12.2	8.11	133.8	634.4	4.18	10.2	10.64	320.7	642.5	3.17	7.5
2	5.51	128.0	631.7	3.07	10.4	7.09	117.0	667.0	3.52	10.2	4.33	157.0	341.0	0.48	14.8
3	8.65	206.0	934.4	2.51	6.9	10.98	213.5	1019.1	4.69	6.4	8.98	524.8	853.6	2.70	5.2
4	3.98	112.8	475.1	2.51	13.3	4.81	94.6	546.9	4.73	12.5	3.03	144.4	669.5	5.58	9.8
5	3.42	85.4	417.8	4.08	15.8	3.39	59.0	492.3	4.90	14.9	2.76	57.2	653.4	7.94	11.8
6	3.43	69.4	401.7	3.51	17.0	3.23	51.3	434.1	4.12	16.9	2.13	45.8	169.3	0.43	35.8
7	4.36	138.8	410.3	3.30	13.6	4.38	108.9	521.3	4.62	12.6	6.22	308.5	699.9	1.79	7.4
8	3.86	116.3	462.5	4.65	13.5	3.61	100.6	480.7	5.90	13.6	3.60	29.8	180.3	0.79	37.2
9	4.40	131.6	399.8	3.44	14.3	4.63	95.4	491.2	5.32	13.5	4.13	224.5	534.6	2.45	9.9
10	4.43	103.7	454.7	4.39	14.1	4.73	77.4	528.3	6.75	13.3	3.69	57.5	205.0	0.81	28.9
11	5.45	203.0	462.4	3.23	11.1	5.33	176.8	528.9	3.59	10.8	6.77	458.2	640.7	3.16	6.4
12	5.65	146.0	584.1	5.49	10.7	5.86	127.2	660.7	7.86	10.1	3.81	68.2	202.5	0.72	27.6
13	5.89	186.8	544.5	4.24	10.4	6.27	204.1	592.0	4.34	9.5	10.08	394.5	605.4	2.64	7.1
14	4.12	107.6	420.4	3.53	14.7	4.54	95.3	479.2	5.64	13.8	4.15	51.1	210.5	1.75	29.2
15	5.26	126.0	432.2	1.67	13.7	7.95	92.6	519.7	3.15	12.9	3.80	133.7	215.4	0.24	20.3
16	11.70	289.0	875.8	1.94	6.5	17.30	325.4	1051.3	3.88	5.5	15.38	492.6	531.3	0.39	6.6
17	4.73	169.4	424.4	2.28	12.6	5.74	138.7	496.6	3.03	12.1	6.05	162.8	727.2	7.79	6.9
18	4.82	141.6	481.5	3.19	12.3	4.53	124.9	527.2	4.50	12.0	3.60	80.8	210.0	0.62	25.5
19	4.36	134.4	387.1	2.06	14.5	5.64	122.0	454.7	2.53	13.4	10.00	355.8	527.0	1.34	7.9
20	5.68	153.0	576.0	3.77	10.6	5.93	174.1	629.2	4.62	9.6	5.76	107.4	231.9	0.52	21.2
21	5.56	220.7	493.1	4.09	10.3	5.81	217.3	584.7	3.51	9.4	12.91	415.4	653.8	2.43	6.6
22	5.20	137.1	556.5	4.69	11.3	5.72	146.7	615.7	6.37	10.3	6.88	79.9	222.5	1.18	24.0
23	6.72	197.7	687.9	3.75	8.7	8.55	180.1	766.1	5.96	8.2	5.87	238.4	860.9	5.94	7.1
24	4.22	157.2	412.9	2.75	13.2	4.13	116.7	477.9	3.25	13.2	7.12	207.5	535.6	4.19	10.0
25	4.24	112.6	429.6	3.56	14.3	4.00	107.4	496.9	5.52	13.1	7.19	48.1	178.3	1.46	32.1
26	8.24	203.7	632.1	2.63	9.1	10.20	152.4	750.0	4.41	8.7	8.62	207.3	293.3	0.35	13.7
27	5.48	210.4	494.8	2.98	10.5	5.16	151.0	559.1	5.46	10.9	8.10	284.3	581.2	3.73	6.4
28	5.15	126.1	478.1	3.69	12.8	5.37	93.5	564.6	6.64	12.2	6.21	88.8	184.9	0.89	25.8
29	6.91	205.3	618.7	2.94	9.2	8.40	156.3	676.5	4.97	9.4	5.86	232.5	880.7	4.44	8.3
30	4.88	194.7	398.2	2.22	12.3	4.29	126.8	474.1	2.88	12.9	8.43	409.9	534.1	1.21	7.4
31	4.71	147.4	454.1	3.06	12.7	4.20	124.9	519.6	5.71	12.2	4.90	52.8	145.0	0.81	30.2
32	8.34	196.2	674.6	4.20	8.8	10.09	155.7	763.8	4.96	8.5	6.89	216.8	278.1	0.24	13.9
SUM	4.34	118.5	389.7	4.06	15.1	4.09	93.8	526.0	5.28	12.9	5.09	152.5	410.4	2.52	13.3
HAG	4.95	148.0	497.1	3.83	11.9	4.91	133.5	559.9	4.86	11.3	5.88	176.6	462.7	2.73	11.7
33	0.62	10.7	93.6	0.06	79.0	0.89	30.8	85.7	0.07	64.8	1.30	55.1	71.9	0.06	54.5
34	6.58	121.1	1117.1	0.62	6.7	7.76	286.2	1090.9	0.79	5.7	14.93	604.6	804.0	0.64	4.9
35	3.29	67.4	581.6	0.33	12.7	4.40	178.8	568.5	0.37	10.3	8.14	321.3	448.6	0.36	9.1
36	2.24	40.1	475.6	0.45	16.3	2.21	64.6	516.5	0.43	14.2	4.91	203.3	292.4	0.24	14.1
37	2.47	40.5	351.1	1.56	21.0	1.36	9.3	420.5	1.73	20.2	2.26	83.9	293.5	0.30	20.5
38	4.09	90.7	177.1	6.18	26.7	1.90	21.9	455.7	5.59	18.0	2.22	53.3	332.0	2.21	22.7
39	3.34	72.0	157.3	6.49	31.6	2.47	40.1	481.4	8.53	16.1	2.71	44.6	409.5	4.64	18.2

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX D,CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

DENVER

	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID
	064	1972	LINC	CONT	460	065	1972	MERC	MONT	400	066	1972	OLDS	CUTL	350
MODE NO.	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG
1	9.32	218.5	635.0	5.42	8.8	4.20	50.6	678.0	8.79	11.5	9.73	164.8	479.6	1.02	11.5
2	8.31	136.7	585.1	5.07	10.7	4.29	54.9	805.6	8.50	9.8	8.99	160.7	595.9	2.16	10.1
3	16.10	310.3	928.0	4.81	6.1	7.11	101.1	1197.6	7.22	6.4	11.61	140.5	905.7	2.23	7.6
4	5.97	118.2	568.4	5.04	11.5	3.7[illegible]	71.2	599.4	6.51	12.3	4.35	46.1	488.5	2.66	15.4
5	3.98	70.4	527.2	7.30	13.6	3.28	48.6	534.6	9.63	14.3	4.29	110.6	394.3	2.23	15.3
6	3.79	55.3	454.2	6.20	16.0	3.80	42.2	512.1	7.94	15.0	4.31	86.1	383.8	2.82	16.7
7	6.25	211.2	492.2	5.51	10.5	5.36	124.2	516.6	7.00	12.2	6.93	191.9	376.4	2.11	12.7
8	5.74	171.4	467.7	5.36	11.8	4.66	116.8	563.7	8.78	11.6	5.84	143.5	439.6	4.58	13.0
9	5.91	152.8	489.3	7.50	11.9	5.28	99.4	548.8	9.90	12.3	6.22	165.5	385.6	3.58	13.3
10	6.24	127.4	511.5	6.62	12.1	5.60	58.9	615.9	11.24	12.2	5.75	105.2	460.3	4.86	13.8
11	9.98	363.0	464.7	3.08	8.3	6.60	225.5	567.7	5.60	9.4	9.32	300.3	381.6	1.14	10.1
12	8.86	218.9	609.4	6.87	9.0	6.28	124.4	749.7	12.14	9.2	8.69	208.4	537.5	5.16	9.4
13	9.65	260.9	645.9	7.79	8.2	6.84	211.9	675.6	8.21	8.6	12.57	338.2	459.8	1.53	8.6
14	5.82	144.6	464.4	5.62	12.5	5.33	97.7	539.8	7.65	12.5	7.28	174.9	390.1	2.76	12.9
15	10.43	122.9	456.0	2.92	13.0	6.64	87.4	530.9	4.01	12.9	8.20	117.4	439.2	1.74	13.7
16	23.73	322.8	839.7	3.01	6.2	12.71	210.9	1047.4	3.46	6.3	17.13	241.7	950.3	2.05	6.4
17	7.26	153.5	520.8	6.57	11.3	4.89	121.3	398.3	8.89	14.7	10.45	282.3	374.9	0.44	10.4
18	5.44	111.8	603.4	6.30	11.1	4.94	93.1	627.2	7.63	11.2	8.55	221.4	400.0	1.53	11.5
19	6.60	143.2	441.9	4.65	12.9	4.28	83.2	515.4	7.89	13.5	8.84	235.8	394.1	0.69	11.2
20	7.53	188.0	653.7	5.08	9.1	5.99	115.4	723.7	8.05	9.6	8.55	202.3	481.6	2.34	10.7
21	12.27	449.1	509.8	2.74	7.1	6.52	205.2	623.7	5.98	9.2	11.27	287.7	453.8	1.32	9.4
22	9.50	234.0	565.8	5.48	9.1	7.47	198.2	653.3	8.11	9.0	[illegible]	224.9	480.3	3.30	10.3
23	14.26	247.4	771.9	8.27	7.4	8.74	181.6	844.4	7.78	[illegible]	[illegible]	169.3	661.7	3.37	9.2
24	5.43	159.1	518.3	6.28	11.3	4.87	129.4	550.1	7.02	11.5	9.59	275.7	368.3	1.28	10.7
25	4.90	123.9	497.5	6.18	12.5	4.95	119.9	524.3	7.14	12.2	9.22	137.8	389.3	2.31	14.0
26	14.54	170.7	690.5	5.28	8.8	10.03	152.8	738.5	5.28	8.8	10.70	134.6	645.3	2.94	10.0
27	8.87	282.3	558.5	5.35	8.6	5.69	161.1	606.4	8.06	10.1	10.53	312.1	346.2	0.91	9.6
28	7.76	211.9	516.2	5.48	10.2	7.06	108.9	587.9	7.92	11.0	7.77	166.5	451.7	3.35	12.0
29	13.43	210.1	701.6	6.28	8.3	10.19	198.3	746.7	6.69	8.1	11.25	189.3	617.1	3.22	9.3
30	5.98	201.9	498.5	5.26	10.6	5.72	141.9	542.8	5.74	11.3	12.53	337.2	365.0	1.07	9.5
31	6.36	190.9	502.9	5.43	10.8	5.55	159.4	550.3	6.70	10.8	8.12	193.7	409.2	2.88	12.0
32	14.30	207.5	693.7	4.54	8.3	10.13	174.0	741.0	5.15	8.5	14.75	252.9	611.8	2.20	8.4
SUM	5.97	154.9	501.7	5.44	11.6	4.83	100.6	591.8	8.55	11.6	6.20	132.4	385.5	4.13	14.5
HAG	8.00	221.9	540.7	5.20	9.7	5.89	151.3	633.4	7.58	10.0	8.90	244.7	446.0	2.54	10.3
33	1.49	34.4	62.9	0.07	72.9	0.98	28.1	98.9	0.15	60.7	0.65	10.3	88.4	0.05	83.2
34	16.26	404.3	782.9	0.44	6.0	7.33	175.6	1317.2	1.30	5.5	5.82	64.8	1107.2	0.57	7.2
35	7.78	207.5	430.4	0.24	11.4	3.11	63.4	676.5	0.67	11.3	2.51	26.1	750.2	0.55	11.1
36	4.24	126.5	345.3	0.29	15.9	2.49	53.1	537.8	0.79	14.1	1.48	3.5	534.2	0.56	16.3
37	2.44	46.2	364.4	2.14	20.0	2.98	17.6	456.7	4.24	18.0	1.96	9.8	213.6	2.19	37.7
38	2.41	52.0	418.4	5.39	17.5	3.09	42.9	511.4	9.18	1[illegible].1	2.31	8.6	313.2	6.16	26.6
39	3.04	81.9	472.4	7.01	14.5	3.05	54.3	601.8	13.28	12.7	2.15	6.2	273.0	9.79	30.7

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX D,CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

DENVER

	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID
	067	1972	OLDS	DELT	455	068	1972	OPEL	1900	116	069	1972	PLYM	DUST	198
MODE NO.	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG
1	4.87	76.6	759.5	4.61	9.9	2.80	69.6	284.8	2.28	22.0	4.44	75.1	267.0	1.85	22.2
2	2.97	27.4	497.4	0.88	16.1	4.14	61.6	350.0	1.87	19.3	4.35	82.4	382.7	3.40	16.9
3	5.86	30.5	1048.2	2.62	8.0	5.66	103.8	481.9	1.58	13.4	7.23	102.2	513.0	3.13	12.7
4	3.02	27.7	846.7	5.28	9.9	2.34	40.7	313.3	2.62	23.1	3.42	64.5	302.5	3.11	21.4
5	2.22	12.7	673.5	7.90	12.7	1.95	25.4	278.2	4.26	27.4	3.07	76.9	277.0	2.90	21.8
6	1.12	9.0	575.9	1.29	14.9	2.04	18.4	240.5	2.76	32.2	2.54	65.8	247.0	2.37	24.8
7	6.43	158.2	712.8	4.24	9.0	2.49	36.7	280.4	3.30	25.7	3.82	105.2	272.6	3.18	19.7
8	1.52	6.4	312.4	3.25	27.1	3.05	56.8	252.4	2.61	25.3	2.59	69.0	291.2	3.56	21.8
9	2.76	20.6	646.7	9.98	12.9	2.72	38.1	250.1	2.91	27.9	3.25	81.5	266.5	3.79	21.9
10	3.08	9.6	271.0	2.59	30.0	2.70	44.4	255.8	2.41	26.6	2.86	55.3	293.6	3.92	22.8
11	8.17	180.6	695.4	4.82	8.8	3.55	73.2	280.1	2.77	21.9	3.85	118.2	298.8	2.99	17.9
12	4.83	13.8	297.5	2.17	26.5	3.99	65.0	326.8	3.43	20.1	3.52	83.3	370.7	4.68	17.3
13	9.67	222.6	713.1	3.79	8.1	4.52	80.1	325.0	3.59	19.1	4.34	128.7	333.8	3.20	16.1
14	2.43	13.9	237.9	1.57	33.2	2.86	49.4	250.2	2.49	26.3	2.59	62.2	266.5	3.13	23.8
15	2.35	31.1	312.1	0.49	24.1	4.12	42.1	238.0	1.20	28.0	3.92	37.5	283.5	3.42	25.0
16	5.29	64.4	829.9	1.05	9.4	8.14	96.3	465.3	1.30	13.8	8.49	82.8	543.2	5.67	12.7
17	6.09	187.3	912.3	5.05	7.2	3.02	55.1	273.8	3.36	24.0	3.80	140.2	281.1	1.48	17.3
18	2.47	33.1	276.8	0.70	26.4	2.91	41.9	281.6	2.68	24.9	3.51	88.1	271.7	2.29	21.1
19	3.84	74.7	836.3	7.40	9.2	2.73	40.6	250.3	3.05	27.5	3.69	113.5	255.6	1.55	19.9
20	2.88	33.3	314.9	0.83	23.6	3.49	45.8	338.0	3.30	21.1	4.39	94.0	321.8	2.87	18.1
21	11.47	343.0	813.1	2.01	6.4	4.41	76.0	360.5	4.33	18.0	4.29	132.6	315.4	3.14	16.5
22	3.67	24.0	254.6	1.04	29.2	4.11	75.5	344.8	3.38	18.6	5.88	94.2	329.1	3.57	17.9
23	5.96	117.5	1074.9	5.59	6.9	5.96	83.4	419.2	4.23	15.6	8.62	126.2	376.4	2.54	14.7
24	3.39	61.0	687.0	7.29	11.2	2.59	38.9	285.7	4.17	25.0	3.80	110.4	271.4	2.79	19.4
25	2.19	18.7	214.1	1.38	35.5	2.41	46.5	237.0	2.42	27.9	2.73	70.5	278.7	3.35	22.3
26	3.19	47.9	370.9	0.66	19.5	6.06	64.2	342.0	1.95	19.2	5.91	63.7	407.8	4.74	16.9
27	5.51	125.8	723.7	5.72	9.5	3.29	63.6	317.7	4.45	20.7	4.28	135.6	292.2	2.44	17.1
28	2.64	25.0	247.6	1.01	30.1	2.88	46.3	284.1	2.68	24.2	4.00	76.2	302.4	3.37	20.4
29	5.75	142.7	895.2	3.23	7.8	5.19	73.0	358.1	3.70	18.1	5.93	96.8	349.7	2.68	17.0
30	5.47	182.8	694.4	3.56	8.9	2.98	32.7	281.7	4.17	25.9	3.84	120.8	258.7	2.26	19.3
31	2.96	24.5	229.6	1.47	32.0	2.43	54.8	285.0	2.78	23.4	2.94	86.5	300.3	3.54	19.9
32	3.49	51.7	353.5	0.60	19.9	5.17	65.9	367.3	2.05	18.2	6.19	80.4	425.7	4.83	15.5
SUM	3.68	77.6	481.1	3.21	14.4	2.56	41.5	277.3	3.18	25.3	3.04	70.7	291.7	3.96	21.5
BAG	3.81	111.8	509.3	3.58	12.7	3.39	64.7	287.0	3.24	22.2	3.76	96.5	295.6	3.33	19.3
33	0.31	9.9	72.5	0.04	99.7	0.40	12.7	32.5	0.03	165	0.45	7.7	33.9	0.04	186
34	5.18	135.8	1024.9	0.68	7.1	3.56	117.4	599.7	0.39	11.2	4.70	85.4	422.5	0.26	15.5
35	2.88	102.4	737.2	0.56	9.8	1.64	36.0	354.8	0.33	21.3	2.70	32.3	326.6	0.85	23.0
36	2.14	72.2	515.8	0.43	14.0	1.12	21.1	251.3	0.26	30.8	2.08	15.6	248.7	1.78	31.7
37	2.11	75.2	342.1	0.53	19.0	1.33	18.8	224.0	1.18	34.4	1.57	9.0	248.3	4.93	33.2
38	2.36	58.5	335.0	1.50	20.4	1.28	11.8	220.4	2.91	36.5	1.57	25.3	254.5	5.39	29.7
39	2.27	49.4	389.3	4.56	18.7	1.52	21.2	257.1	4.55	[illegible]	1.74	45.8	285.4	5.67	24.5

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX D,CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

DENVER

VEH	YEAR	MAKE	MODL	CID
070	1972	PLYM	SATE	318
071	1972	PONT	LEMA	350
072	1972	PONT	BONN	455

MODE NO.	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG
	070					**071**					**072**				
1	5.34	74.8	492.2	2.03	14.2	5.95	160.0	456.0	1.12	12.2	11.40	287.8	398.9	1.98	10.0
2	7.14	61.8	581.0	3.80	12.7	7.26	140.3	598.5	1.16	10.5	9.83	263.9	424.9	1.64	10.2
3	10.35	97.4	864.3	3.23	8.5	10.78	220.0	853.6	1.39	7.2	14.81	364.2	624.8	2.56	7.1
4	5.10	67.5	498.0	3.11	14.3	4.60	93.8	530.3	1.53	12.8	6.92	195.7	344.7	1.64	13.2
5	4.20	53.5	452.3	4.72	16.1	3.48	82.0	467.5	2.14	14.6	6.37	213.3	301.2	1.34	13.5
6	4.12	31.5	422.3	4.45	18.3	3.46	52.3	395.6	2.27	18.2	5.47	170.6	259.9	1.60	16.3
7	5.20	112.5	449.1	3.95	13.8	4.43	161.6	410.7	1.67	13.1	7.31	256.2	275.2	1.79	12.7
8	5.26	90.7	360.0	4.28	14.3	4.69	118.2	389.4	2.41	15.0	5.96	199.2	284.9	3.06	14.4
9	4.78	56.2	455.1	5.65	15.9	4.41	125.5	392.9	2.33	14.7	6.90	215.0	283.0	2.60	13.8
10	5.49	52.3	522.6	5.62	14.3	5.13	94.8	407.6	2.66	15.5	6.14	153.7	303.1	3.84	15.7
11	5.91	134.8	463.7	3.09	12.8	6.07	230.3	439.4	1.24	10.8	8.68	332.4	300.9	1.36	10.4
12	7.48	104.3	593.8	5.30	11.4	6.95	152.6	512.8	3.33	11.5	8.49	262.4	370.7	3.85	11.0
13	6.81	125.8	541.7	4.34	11.7	7.44	275.0	469.6	1.24	9.6	10.61	390.0	342.6	1.69	9.0
14	5.78	88.7	450.5	3.95	14.6	5.47	127.1	370.1	2.13	15.1	6.98	204.2	274.6	2.64	14.4
15	7.99	46.9	479.7	3.35	15.3	7.72	102.7	377.9	1.27	15.7	7.97	141.3	300.8	2.09	16.2
16	16.12	72.5	998.3	4.39	7.6	16.28	230.9	878.2	1.51	6.9	17.20	317.0	670.6	5.52	7.3
17	5.94	81.5	412.6	2.61	15.9	5.96	173.4	389.8	1.20	13.0	7.99	266.8	295.2	1.83	12.0
18	5.93	84.2	519.4	4.42	13.2	5.62	157.4	453.4	1.72	12.9	7.62	274.3	311.7	1.35	11.6
19	5.45	67.9	401.2	2.35	16.9	5.29	131.4	408.3	1.29	14.1	7.02	214.9	266.2	1.31	14.2
20	7.49	103.6	615.6	4.93	11.1	7.12	174.2	522.8	1.56	10.8	9.20	316.3	362.5	1.45	10.0
21	7.55	173.8	492.0	3.17	11.2	6.94	266.9	414.9	0.94	10.4	8.67	339.9	353.1	4.17	9.7
22	7.26	113.7	556.8	4.44	11.7	7.51	179.7	460.7	1.83	11.6	8.03	219.6	348.2	3.35	12.3
23	9.86	93.5	704.1	4.81	10.1	10.03	209.7	601.9	2.23	9.2	10.99	283.0	478.7	3.10	9.3
24	4.89	57.6	466.6	5.36	15.5	4.94	158.0	409.8	1.23	13.2	7.10	274.1	287.3	1.54	12.0
25	4.95	66.2	486.9	5.12	14.6	5.01	134.9	380.4	1.78	14.6	5.90	190.3	277.3	2.58	14.9
26	10.34	49.3	727.9	6.42	10.6	9.71	156.1	574.0	1.73	10.4	11.54	234.5	419.2	3.03	10.8
27	6.20	108.3	514.7	4.31	12.6	7.56	269.2	412.2	0.84	10.3	9.15	330.9	323.3	1.61	10.2
28	6.55	84.8	528.9	4.61	13.0	6.94	153.0	420.7	1.86	13.0	7.21	196.9	305.8	2.73	13.9
29	8.56	62.4	651.2	4.94	11.4	9.20	199.1	520.4	1.33	10.3	9.85	238.0	445.4	2.61	10.4
30	4.96	54.4	462.9	5.73	15.7	5.39	197.6	406.9	1.00	12.1	7.83	285.0	295.5	1.56	11.6
31	5.32	83.9	512.9	5.26	13.4	5.81	171.2	416.1	1.96	12.6	5.91	205.3	309.5	2.93	13.6
32	10.64	69.7	733.2	6.16	10.1	10.99	183.5	605.8	1.84	9.6	10.25	234.0	437.6	3.08	10.6
SUM	5.28	79.9	467.4	4.18	14.6	4.95	123.5	433.4	2.37	13.8	6.29	184.2	415.1	3.49	12.3
BAG	5.90	95.5	502.8	4.46	13.2	6.23	176.9	442.3	1.80	12.0	8.65	272.3	558.8	1.66	8.8
33	0.37	0.2	66.5	0.01	130	1.06	26.9	49.4	0.03	93.3	1.35	28.2	96.1	0.07	61.4
34	2.84	5.8	1062.0	0.50	8.2	10.65	283.0	626.0	0.35	8.0	11.81	346.8	1141.8	0.57	5.1
35	1.49	7.3	646.4	0.67	13.4	5.30	143.2	621.0	0.45	10.3	6.03	182.3	573.8	0.28	10.1
36	1.94	22.1	464.2	0.75	17.6	3.69	92.7	463.0	0.37	14.3	4.93	171.9	512.1	0.35	11.1
37	2.98	13.5	359.4	4.34	22.8	1.76	24.5	433.8	1.17	18.6	2.87	61.1	481.0	1.04	15.1
38	3.69	50.0	372.2	4.64	19.2	2.86	47.9	352.1	2.75	20.3	3.78	72.9	469.6	4.04	14.9
39	4.76	105.8	396.0	3.62	15.4	3.24	47.7	415.7	5.04	17.7	3.52	65.6	549.6	8.09	13.4

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX D.CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

DENVER

MODE NO.	VEH 073	YEAR 1972	MAKE TOYO	MODL CORO	CID 97	VEH 074	YEAR 1972	MAKE VOLK	MODL SEDA	CID 97	VEH 075	YEAR 1972	MAKE VOLK	MODL SEDA	CID 97
	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG
1	4.29	48.9	245.0	1.53	26.5	6.74	68.3	288.0	2.50	21.3	6.50	41.2	262.9	2.89	25.5
2	4.65	68.7	339.7	1.61	19.2	6.06	64.9	334.1	2.20	19.5	7.09	90.0	331.9	3.18	17.9
3	6.99	78.7	463.8	1.39	14.6	10.70	134.2	559.7	2.20	11.0	12.82	128.1	448.6	3.25	12.9
4	3.39	36.0	267.4	1.74	26.5	4.87	68.3	251.4	1.59	23.7	5.34	77.5	275.9	2.92	21.4
5	2.74	32.3	260.4	2.71	27.8	3.29	38.8	231.9	3.27	29.3	3.59	48.0	237.3	3.84	27.4
6	2.47	35.7	233.1	2.27	29.9	2.81	27.9	224.6	2.38	32.0	2.99	40.5	221.3	3.03	30.1
7	3.21	60.4	277.9	2.85	23.2	2.75	33.6	207.1	3.81	33.0	2.73	39.5	179.7	3.23	35.4
8	2.73	58.1	260.5	2.75	24.6	2.32	39.2	254.3	3.09	27.5	3.38	43.0	255.7	4.64	26.6
9	2.72	39.4	252.5	3.82	27.5	2.18	33.3	219.6	4.15	31.8	3.39	41.4	220.9	4.99	29.9
10	3.06	48.4	272.1	3.37	24.8	1.99	34.3	263.0	3.30	27.5	3.05	53.4	249.3	3.70	25.9
11	3.62	82.6	288.7	2.35	20.6	2.64	38.5	229.4	4.17	29.8	4.79	58.2	261.7	4.98	24.1
12	3.95	73.4	340.6	3.78	18.9	2.63	45.4	329.7	4.16	21.7	4.21	62.0	314.7	4.80	20.9
13	4.14	91.1	328.5	2.56	18.3	4.05	61.4	323.8	6.07	20.5	5.97	80.5	315.3	5.98	19.3
14	2.93	61.7	240.7	2.14	25.6	2.29	36.9	249.3	3.13	28.2	3.53	47.7	238.4	3.64	27.4
15	3.68	57.9	256.5	1.12	24.7	3.41	50.0	268.4	1.73	24.8	5.10	62.3	242.9	2.11	24.9
16	8.03	93.7	527.1	1.29	12.7	8.68	124.4	538.0	1.80	11.7	12.97	131.9	503.4	3.02	11.8
17	3.33	54.2	264.2	2.09	24.7	4.95	60.7	285.5	4.31	22.4	7.41	62.8	230.9	3.91	25.1
18	3.45	59.4	278.6	1.98	23.2	2.84	42.4	324.1	4.12	22.2	5.28	85.7	292.8	3.19	20.0
19	3.12	46.3	245.8	1.70	27.0	3.96	45.9	239.9	2.65	27.3	5.71	58.5	217.4	3.52	27.1
20	4.20	86.9	330.4	1.83	18.5	3.14	54.5	372.5	4.24	19.0	5.68	63.9	295.3	3.95	21.5
21	3.18	79.9	266.5	1.99	22.1	4.70	66.0	291.8	4.04	21.6	6.08	63.0	258.6	4.55	23.5
22	4.39	100.2	293.8	1.68	19.1	3.19	52.7	312.4	3.56	21.9	7.20	70.6	273.6	3.80	21.8
23	5.10	79.9	372.4	2.18	17.3	7.04	97.7	372.4	3.07	16.2	13.42	127.4	404.6	4.28	13.7
24	2.88	61.7	261.7	2.34	24.1	3.61	56.3	298.8	5.09	22.3	5.21	78.9	280.8	4.51	21.1
25	3.04	62.5	244.9	2.16	25.2	2.35	34.1	257.5	3.60	27.9	3.65	58.1	229.4	2.88	26.7
26	5.47	78.3	371.6	1.67	17.3	4.98	65.3	389.0	2.87	17.5	8.15	82.0	311.5	2.74	19.0
27	3.24	77.2	295.8	2.29	20.8	3.83	61.8	292.4	4.79	22.1	5.27	77.4	306.6	4.56	19.9
28	3.82	68.6	271.4	2.10	22.7	2.31	39.8	273.1	3.46	25.9	3.85	59.1	247.2	2.88	25.2
29	4.49	59.6	337.8	2.03	19.9	5.74	83.5	356.1	3.02	17.6	7.67	92.3	359.3	3.65	16.8
30	3.81	95.0	265.1	1.92	20.8	3.60	57.5	297.1	4.97	22.3	4.27	79.0	296.5	4.66	20.4
31	3.19	70.5	265.7	2.48	23.0	2.57	42.0	279.8	3.81	25.1	3.36	60.1	250.0	3.05	25.0
32	5.51	88.5	387.7	1.94	16.3	4.73	64.8	399.0	3.26	17.2	7.34	86.9	317.8	2.97	18.6
SUM	3.02	53.4	243.9	2.86	26.3	2.66	38.6	267.5	3.84	26.4	3.56	51.3	255.2	3.82	25.6
BAG	3.27	76.9	275.9	2.31	21.8	3.08	50.8	279.7	3.99	24.0	4.87	64.5	259.9	4.03	23.6
33	0.43	4.3	32.1	0.02	220	0.64	9.4	39.1	0.03	158	0.68	4.1	44.5	0.13	167
34	4.72	53.0	396.3	0.18	17.9	4.64	113.4	463.6	0.11	13.5	3.84	39.8	384.2	0.37	19.3
35	2.92	22.5	332.2	0.24	23.6	2.93	48.3	448.9	0.64	16.6	2.94	37.1	435.6	0.92	17.6
36	2.04	7.7	258.0	0.44	32.1	1.96	34.2	260.1	0.37	27.7	1.75	22.2	247.6	0.72	30.8
37	1.88	21.7	219.0	1.21	34.3	1.47	20.9	208.0	1.41	36.2	1.50	36.1	198.6	1.53	34.1
38	2.06	23.0	311.3	3.94	25.1	1.36	18.2	206.2	3.37	37.1	1.20	25.5	197.6	3.16	36.8
39	2.40	41.2	98.4	4.98	52.0	1.35	17.6	247.6	5.47	31.7	1.25	31.5	235.6	4.95	30.7

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

HOUSTON

	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID
	001	1974	BUIC	LESA	455	002	1974	CHEV	NOVA	350	003	1974	CHEV	MALI	350
MODE NO.	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG
1	4.92	26.8	769.7	3.97	10.7	6.34	124.1	735.7	2.19	9.3	4.92	36.8	801.8	2.03	10.1
2	5.87	14.4	941.1	1.63	9.0	5.52	109.2	701.7	1.13	10.0	5.40	47.7	1043.8	1.75	7.8
3	9.63	14.7	1380.1	2.32	6.2	7.96	118.0	992.1	1.27	7.4	9.98	43.3	1282.8	1.57	6.4
4	3.57	6.5	741.4	2.39	11.6	3.36	65.7	615.2	1.45	12.2	3.95	28.8	756.8	1.15	10.9
5	2.47	8.5	641.9	3.39	13.4	2.51	42.9	550.5	3.43	14.2	2.47	24.8	643.1	1.73	12.9
6	2.35	8.2	625.1	2.02	13.8	2.26	32.6	489.7	1.26	16.2	2.10	20.2	654.1	1.45	12.8
7	2.55	43.6	651.1	3.97	12.2	3.16	25.8	550.3	2.59	14.8	2.71	87.8	571.1	1.43	12.4
8	2.24	32.6	667.8	2.86	12.2	2.84	114.9	518.4	1.60	12.5	2.16	69.1	671.5	2.03	11.3
9	2.81	32.5	623.9	4.21	13.0	2.75	34.1	525.0	4.11	15.1	2.68	71.2	565.8	1.54	12.9
10	2.70	17.7	702.9	2.80	12.0	2.38	35.8	570.0	1.65	14.0	2.62	54.7	691.8	1.83	11.3
11	2.87	49.6	732.4	5.45	10.8	3.86	71.6	554.2	2.98	13.1	3.29	132.8	655.0	1.20	10.2
12	3.58	28.6	881.8	3.84	9.5	3.40	98.9	683.5	1.94	10.4	3.10	83.8	857.6	2.33	8.9
13	3.33	60.4	821.6	5.49	9.6	4.67	88.5	603.5	2.88	11.7	3.37	119.9	701.9	2.05	9.8
14	2.32	18.8	658.1	3.08	12.8	2.54	72.2	524.2	1.42	13.7	2.02	63.4	648.1	1.66	11.8
15	4.04	12.7	730.9	1.71	11.6	4.50	72.0	566.9	0.72	12.8	3.82	32.3	723.2	0.97	11.3
16	9.31	21.7	1603.5	3.22	5.3	10.27	224.7	1237.4	0.94	5.5	7.56	48.0	1483.3	1.33	5.6
17	2.88	27.4	763.2	4.08	10.9	3.62	56.5	560.4	2.75	13.4	2.61	70.5	667.5	1.81	11.3
18	2.45	16.9	713.7	2.59	11.9	4.06	93.2	582.7	1.20	12.0	2.07	42.3	717.3	1.47	11.2
19	2.63	26.4	708.4	3.09	11.7	2.62	67.4	539.9	1.81	13.6	2.08	45.6	652.8	1.39	12.1
20	3.22	27.4	832.9	2.74	10.0	5.86	132.0	682.8	1.18	9.8	2.58	40.5	842.7	1.67	9.7
21	3.11	111.5	584.9	3.45	11.5	4.16	99.2	612.0	1.99	11.4	3.99	209.6	633.8	1.25	9.1
22	3.06	39.9	791.3	3.83	10.3	5.39	146.9	600.7	1.38	10.5	3.24	86.4	752.5	1.73	9.9
23	5.09	27.4	990.7	4.41	8.5	7.19	116.5	764.5	2.00	9.1	4.73	49.1	861.0	1.93	9.5
24	2.19	25.0	670.5	3.98	12.4	3.33	69.1	540.3	3.30	13.5	2.48	118.4	591.8	1.24	11.5
25	2.07	16.7	639.0	3.16	13.2	2.59	85.1	520.0	1.43	13.4	2.02	81.6	617.1	1.45	11.8
26	5.89	21.8	1003.6	2.48	8.4	7.46	129.6	787.4	1.04	8.7	4.83	59.6	981.9	1.09	8.1
27	2.56	56.2	766.4	4.56	10.3	4.80	137.8	589.9	2.50	10.8	2.75	131.6	649.9	1.71	10.3
28	2.91	15.6	713.7	3.22	11.9	3.95	76.5	586.6	1.32	12.3	2.58	44.9	684.2	1.65	11.6
29	4.65	13.6	928.5	3.35	9.2	6.52	97.5	708.0	1.59	10.1	3.90	42.2	853.0	1.59	9.5
30	2.32	49.8	656.5	3.50	12.0	3.46	72.7	533.0	1.96	13.5	2.81	168.8	605.6	0.94	10.1
31	2.03	23.6	704.6	3.52	11.9	3.91	157.5	527.9	1.21	11.3	2.23	103.9	648.4	1.53	10.8
32	5.24	19.6	1014.4	2.67	8.4	7.65	130.2	758.2	0.89	9.0	5.03	69.7	932.5	1.10	8.4
SUM	2.23	22.9	700.5	3.38	11.9	3.43	69.3	580.1	1.88	12.7	2.04	60.1	664.2	1.50	11.6
RAG	2.58	33.9	769.3	3.59	10.7	3.79	107.3	612.4	2.19	11.2	2.33	99.5	701.5	1.55	10.3
33	0.44	0.9	143.9	0.07	60.5	0.85	33.3	101.7	0.03	56.6	0.95	2.6	106.1	0.07	78.4
34	4.44	8.9	1705.4	1.04	5.1	7.01	313.4	1303.7	0.44	4.9	4.08	42.0	1510.1	1.11	5.6
35	2.37	6.2	1132.7	1.04	7.7	3.10	144.7	679.8	0.22	9.7	2.07	22.2	890.9	0.51	9.5
36	1.44	4.1	773.7	0.69	11.3	1.33	82.7	664.9	0.24	11.1	1.81	47.8	1064.9	0.58	7.7
37	1.51	4.1	576.9	0.55	15.1	1.15	49.6	510.9	0.30	15.0	0.50	16.6	494.9	0.31	17.0
38	0.94	4.2	567.5	1.41	15.4	8.65	14.7	493.3	1.18	16.3	0.33	12.3	524.9	0.93	16.3
39	0.87	8.1	607.7	5.05	14.2	0.99	25.6	551.3	2.58	14.9	0.29	19.2	603.1	2.15	14.0

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX D.CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

HOUSTON

	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID
	004	1974	DODG	CHAR	318	005	1974	FORD	TORI	302	006	1974	FORD	CUST	351
MODE NO.	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG
1	6.41	88.9	828.8	5.31	9.0	4.59	22.1	879.0	3.80	9.6	7.21	111.1	817.6	12.05	8.7
2	5.32	64.3	731.3	2.79	10.5	4.14	16.3	742.8	2.18	11.4	10.97	49.5	742.5	5.30	10.4
3	8.75	125.9	1110.1	2.87	6.6	7.48	15.2	1076.7	1.61	7.9	11.68	166.7	1032.7	4.73	6.7
4	3.58	44.8	744.9	3.71	10.7	3.46	7.1	661.7	2.34	13.0	4.27	58.9	602.7	6.70	12.5
5	2.52	15.9	655.8	5.33	12.9	2.15	4.1	592.0	3.34	14.7	2.87	14.8	544.6	10.29	15.4
6	2.20	8.4	494.4	3.01	17.2	1.79	3.9	562.9	1.72	15.4	3.56	9.9	511.6	7.33	16.5
7	2.89	25.5	632.0	7.58	13.0	2.91	61.9	589.2	3.76	12.8	2.59	33.3	550.7	13.11	14.5
8	2.37	34.9	588.8	4.72	13.6	2.09	27.5	567.5	3.09	14.4	3.94	32.0	614.4	8.25	13.1
9	2.50	16.7	646.5	8.84	13.0	2.54	17.8	590.2	5.40	14.2	3.45	19.5	541.6	13.32	15.2
10	2.69	13.0	595.0	5.56	14.2	2.26	9.9	596.2	3.11	14.3	3.96	18.3	586.6	8.33	14.1
11	3.31	46.3	711.5	11.43	11.2	3.40	84.8	620.5	4.42	11.6	3.08	51.5	591.7	15.41	13.0
12	3.37	22.3	755.9	7.34	11.1	2.84	22.9	741.8	4.15	11.3	5.25	26.6	793.9	11.55	10.4
13	3.83	50.7	771.0	12.24	10.3	3.66	60.9	711.6	5.71	10.8	3.75	52.1	680.4	18.67	11.5
14	2.58	16.9	538.4	5.58	15.5	2.04	17.3	548.2	2.97	15.3	13.12	21.6	577.4	8.73	13.6
15	4.28	45.1	540.9	2.99	14.2	3.06	12.9	598.8	1.61	14.1	6.64	58.3	602.9	4.26	12.4
16	10.17	180.9	1046.2	3.60	6.5	6.92	17.7	1170.7	1.73	7.3	13.91	263.0	1053.5	4.30	5.9
17	3.66	75.7	578.7	7.41	12.5	2.61	20.5	567.1	4.80	14.6	3.49	78.9	586.0	13.17	12.3
18	3.11	30.0	627.8	3.49	13.0	2.09	7.5	717.6	2.72	12.1	8.55	115.1	613.5	7.58	11.0
19	3.33	55.8	545.0	7.18	13.8	2.53	19.9	504.8	4.08	16.3	3.51	65.0	530.8	12.58	13.6
20	3.80	33.5	741.6	3.97	11.0	2.65	11.7	842.0	3.03	10.2	5.66	35.7	745.7	8.31	10.8
21	3.65	79.6	610.2	8.17	11.9	3.25	111.1	618.5	4.16	11.0	2.90	80.2	621.9	14.50	11.7
22	3.81	48.0	694.4	5.26	11.4	3.21	41.3	711.3	3.07	11.3	5.40	42.2	735.0	9.39	10.8
23	6.25	101.0	810.5	6.59	9.0	4.64	26.6	840.3	3.88	9.9	7.31	128.4	590.0	10.49	10.9
24	2.72	33.2	610.4	8.51	13.2	2.19	16.8	589.8	5.22	14.2	2.71	25.6	535.4	13.33	15.2
25	2.53	20.9	562.7	4.88	14.7	1.88	9.2	583.2	3.58	14.7	3.44	16.3	586.0	9.25	14.3
26	6.10	63.5	755.8	3.62	10.1	4.32	13.1	877.5	2.79	9.7	10.29	96.8	827.3	6.56	8.8
27	3.28	53.0	683.8	10.19	11.4	2.59	38.1	669.1	5.69	12.0	3.17	41.5	637.9	17.69	12.4
28	3.52	27.2	567.8	4.38	14.3	2.45	9.6	629.6	2.97	13.6	4.39	29.1	536.8	8.90	14.9
29	5.85	117.1	770.5	4.95	9.1	3.87	9.3	836.6	3.63	10.3	6.85	120.9	768.7	8.96	9.1
30	2.91	41.5	630.8	9.55	12.6	2.33	32.7	605.8	4.71	13.4	2.61	24.7	601.1	14.80	13.7
31	3.05	36.6	590.9	4.73	13.5	2.05	21.1	605.2	3.25	13.8	3.56	17.5	596.7	9.71	14.0
32	6.75	70.6	771.0	3.97	9.8	4.84	21.5	853.2	2.66	9.8	10.19	74.6	762.0	7.47	9.7
SUM	2.90	33.2	610.6	6.97	13.2	2.10	20.2	619.7	3.45	13.5	3.87	39.3	552.2	9.40	14.2
MAG	3.03	44.9	705.0	6.65	11.3	2.74	29.1	660.8	4.14	12.4	3.60	41.4	648.3	9.31	12.2
33	0.87	18.9	142.9	0.69	50.6	0.39	0.2	98.1	0.00	89.1	1.99	26.5	180.1	1.65	38.9
34	7.60	266.5	993.1	0.65	6.2	5.86	4.1	1149.3	0.62	7.6	11.32	293.6	1185.5	2.08	5.3
35	3.92	140.3	775.6	1.03	8.8	1.38	4.6	921.7	0.31	9.5	6.07	161.7	682.6	0.63	9.3
36	2.13	70.0	603.0	0.83	12.3	1.07	3.5	646.3	0.69	13.5	4.01	100.5	471.4	0.29	13.8
37	1.82	19.5	410.9	4.73	19.8	0.73	2.7	534.2	1.04	16.4	1.92	30.6	356.4	1.11	21.6
38	1.64	6.1	467.4	3.91	18.4	1.11	7.5	567.4	1.50	15.2	2.30	9.5	428.6	7.14	19.7
39	2.00	8.5	553.6	9.49	15.5	1.15	4.2	536.9	4.43	16.2	1.90	14.8	381.7	7.82	21.6

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

```
                         APPENDIX D,CONT'D

          LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

                              HOUSTON

      VEH  YEAR  MAKE  MODL  CID      VEH  YEAR  MAKE  MODL  CID      VEH  YEAR  MAKE  MODL  CID
      ---  ----  ----  ----  ---      ---  ----  ----  ----  ---      ---  ----  ----  ----  ---
      007  1974  OLDS  DELT  350      008  1974  PLYM  DUST  318      009  1974  PONT  CATA  400

MODE
NO.    HC     CO    CO2   NOX   MPG     HC     CO    CO2   NOX   MPG     HC     CO    CO2   NOX   MPG
------------------------------------------------------------------------------------------------------
 1    5.65   31.1  875.2  6.67  9.4    4.00 135.7  629.7  5.19 10.4    9.42 173.2  706.5  1.54  8.8
 2    5.20   19.6  864.2  2.47  9.7    4.28  67.6  634.5  2.88 11.8    8.26 190.5  695.0  1.30  8.7
 3    9.88   20.4 1458.9  2.73  5.8    8.28 206.1  937.2  3.00  6.9   13.29 389.9 1044.2  1.36  5.2

 4    3.73    9.5  911.5  2.54  9.5    3.86  67.2  640.3  4.02 11.7    5.13 137.6  604.5  1.88 10.6
 5    2.89   33.8  783.0  4.15 10.5    3.32  18.1  572.2  6.20 14.5    3.59  68.5  529.0  3.70 13.7
 6    2.95    8.1  614.0  2.00 14.0    3.84   7.1  443.0  3.29 19.0    3.21  52.2  507.6  1.79 14.8

 7    4.59  199.2  734.2  4.45  8.4    3.43  22.9  598.7 11.08 13.7    4.00  86.3  573.3  5.92 12.3
 8    2.03   44.2  691.3  2.94 11.6    3.04  14.7  488.4  4.92 17.0    3.54  76.1  586.3  3.25 12.4
 9    4.14  178.7  680.7  2.47  9.1    3.21  14.8  544.6  8.91 15.4    4.04  58.7  550.1  5.52 13.5

10    3.48   33.2  648.7  2.39 12.5    3.70  14.8  489.2  4.75 16.9    4.45  51.8  579.2  3.24 13.2
11    5.61  298.9  717.0  2.49  7.4    3.80  47.8  620.8 11.69 12.5    4.84 111.6  638.0  6.30 10.7
12    4.42   63.2  817.4  2.86  9.5    4.55  15.0  624.1  7.49 13.4    5.54  73.0  796.6  4.70  9.6

13    6.30  296.5  764.2  2.62  7.1    4.77  44.3  690.7 13.45 11.4    5.34 108.5  724.8  7.03  9.7
14    3.03   52.5  575.3  2.28 13.3    2.48  10.1  467.3  5.69 18.1    4.06  55.5  588.2  3.63 12.9
15    4.48   28.2  648.8  2.93 12.5    4.15  49.9  443.8  2.83 16.6    8.44 117.6  548.5  1.96 11.7

16    9.58   28.3 1446.0  4.49  5.8   14.91 240.8  878.4  2.81  6.8   21.51 406.4 1143.5  2.51  4.8
17    4.12  138.8  758.3  3.07  9.0    4.94  75.4  561.2  8.47 12.8    6.21 149.7  607.9  3.94 10.3
18    3.22   42.8  715.2  1.81 11.2    3.86  22.1  539.4  4.59 15.1    4.62  80.9  606.7  2.40 11.9

19    3.97  111.6  671.2  2.53 10.3    5.18  54.0  538.0  6.96 13.9    5.34 120.7  623.8  3.41 10.7
20    5.51   56.2  835.2  2.25  9.4    5.60  20.6  570.5  5.65 14.3    5.93  99.0  722.7  2.92  9.9
21    4.87  217.8  721.6  3.47  8.2    4.27  51.5  651.9 13.09 11.9    5.82 234.3  624.3  3.40  8.8

22    3.93   69.4  796.0  2.98  9.7    3.42  17.4  605.3  6.25 13.8    6.11 103.4  679.6  3.90 10.3
23    5.84   31.2 1076.4  5.93  7.8    6.26 117.2  767.8  6.72  9.1   10.21 205.7  769.2  3.09  7.9
24    4.06  189.9  646.8  3.10  9.3    3.42  17.2  559.2 11.06 14.9    3.79  75.4  569.9  4.94 12.7

25    3.31   53.7  572.1  2.48 13.3    3.03  10.6  474.9  5.78 17.7    3.73  59.4  596.8  4.02 12.6
26    7.22   42.0  879.2  3.54  9.2    8.00  85.8  657.1  4.43 10.9   11.62 172.6  773.7  2.77  8.2
27    4.55  164.9  751.8  3.63  8.7    4.29  37.6  616.6 12.46 12.9    4.75 100.1  582.3  5.00 11.8

28    3.77   38.1  659.4  2.55 12.1    3.69  17.2  498.8  5.78 16.5    5.12  73.2  643.6  3.26 11.5
29    6.06   21.0  976.3  6.04  8.6    6.38  92.0  689.4  6.82 10.4    8.41 203.2  688.4  2.09  8.6
30    4.30  181.3  647.2  3.05  9.4    3.41  17.0  569.5 11.13 14.6    3.84  94.6  507.9  4.26 13.3

31    2.85   67.5  672.5  2.60 11.3    2.63   8.5  518.8  5.61 16.4    3.70  64.3  638.2  3.74 11.8
32    6.37   51.1  916.5  4.14  8.7    3.51  58.8  656.8  4.20 11.7   10.21 140.0  850.7  3.08  8.0


SUM   5.00   71.4  699.3  2.91 10.8   4.53  28.8  531.8  6.74 15.0    4.07  83.6  556.3  2.96 12.7
HAG   3.58  117.9  798.6  3.19  8.9   3.80  33.6  603.6  7.63 13.3    4.97 105.5  643.9  3.72 10.8


33    0.76    0.9  128.8  0.06 66.9    1.52  16.0  130.7  0.00 55.3    1.28  55.3   82.0  0.06 51.3
34   13.17   11.6 1581.4  0.87  5.4    7.87 288.2 1271.7  0.63  5.1   15.13 580.7 1214.6  1.10  4.1
35    2.87   11.5 1134.1  0.95  7.6    4.82 209.2  625.4  0.42  9.2    7.94 275.5  573.0  0.20  8.6
36    1.30    8.1  768.6  0.60 11.3    2.90 130.4  447.2  0.63 13.4    3.96 140.5  497.8  0.25 12.1

37    1.08    4.1  499.5  1.81 17.4    3.69  23.9  368.2  2.12 21.3    2.33  48.4  378.2  1.06 19.2
38    0.92    3.3  576.0  1.57 15.2    7.69   5.0  391.7  3.89 20.9    1.95  31.6  449.9  1.66 17.5
39    0.73    3.8  671.4  3.95 13.1    4.49   4.3  462.4  6.98 18.4    1.80  22.4  435.6  1.47 18.6


EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO
```

APPENDIX D,CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

HOUSTON

```
              VEH  YEAR  MAKE  MODL  CID         VEH  YEAR  MAKE  MODL  CID        VEH  YEAR  MAKE  MODL  CID
              ---  ----  ----  ----  ---         ---  ----  ----  ----  ---        ---  ----  ----  ----  ---
              010  1974  VOLK  SEDA   97         011  1973  AMMO  GREM  258        012  1973  HUIC  STAW  350

MODE
NO.       HC     CO     CO2   NOX   MPG      HC     CO     CO2   NOX   MPG      HC     CO     CO2    NOX   MPG
-------------------------------------------------------------------------------------------------------------------
 1       6.63   50.8   403.1  2.65 17.6     6.65 238.6   504.5  0.97  9.9     4.23   48.1   953.4  6.50  8.5
 2       7.87   82.3   365.5  3.44 17.1     6.52 233.4   452.1  0.87 10.6     4.79   44.8   878.0  4.05  9.2
 3      10.69  123.6   531.4  2.41 11.7    11.92 360.6   755.9  1.58  6.5     8.65   90.8  1224.6  3.10  6.4

 4       4.77   56.9   355.5  1.99 19.3     5.28 189.1   435.3  0.91 11.8     3.42   21.6   632.0  2.38 13.1
 5       2.83   32.5   329.6  3.93 22.8     3.96 173.0   361.8  0.95 13.7     2.38   14.7   548.0  3.11 15.3
 6       2.47   22.1   273.4  4.63 28.1     3.48 162.4   298.9  0.65 15.7     2.61   10.5   577.4  3.14 14.7

 7       2.69   32.8   310.9  4.14 23.9     4.03 177.9   396.0  1.84 12.9     1.76  112.0   550.9  4.28 12.1
 8       2.51   58.7   285.6  4.33 23.0     3.64 179.6   343.0  0.91 13.9     3.04   20.2   629.3  5.34 13.2
 9       2.41   34.0   305.4  4.05 24.2     4.10 185.0   368.4  1.07 13.2     2.02   14.0   556.8  5.49 15.2

10       2.42   42.7   285.0  4.57 24.7   . 4.26 183.2   349.9  0.84 13.6     2.19    9.6   670.0  5.47 12.8
11       2.98   46.1   317.3  3.77 22.2     4.29 180.9   420.5  1.79 12.4     2.10   51.5   657.3  6.74 11.9
12       3.10   54.6   358.7  5.36 19.5     5.14 234.4   453.9  1.08 10.6     2.80   16.9   858.5  7.52  9.9

13       3.92   52.9   359.0  6.29 19.5     4.97 198.6   435.5  1.84 11.6     2.50   57.2   765.7  7.80 10.3
14       2.29   38.3   264.9  2.71 26.7     3.64 172.7   340.1  0.82 14.2     1.87   10.4   625.7  5.56 13.7
15       3.83   44.1   277.1  2.16 24.8     6.90 163.6   388.7  0.85 13.3     2.65   27.1   652.0  2.82 12.6

16       9.81  121.5   555.6  2.54 11.4    11.59 328.8   740.5  1.87  6.9     6.41  107.9  1437.1  3.47  5.5
17       4.37   79.8   369.0  4.96 17.7     4.33 159.1   373.9  1.28 13.9     2.07   32.1   669.6  5.99 12.2
18       3.31   32.0   284.6  2.50 25.7     4.09 201.8   370.2  0.75 12.7     2.52   14.7   668.9  4.64 12.7

19       3.63   58.7   306.0  4.47 21.7     3.87 135.4   334.1  1.18 15.9     1.52   25.1   608.7  5.37 13.6
20       3.91   45.3   329.8  3.50 21.5     5.01 232.9   431.1  0.88 10.9     3.37   23.1   787.6  5.25 10.6
21       3.62   58.0   299.8  4.12 22.1     4.02 175.3   444.8  2.09 12.1     2.14  148.7   695.8  4.92  9.5

22       3.30   59.5   302.2  2.68 21.9     4.69 201.3   400.6  1.01 12.1     3.42   43.9   747.1  5.40 10.7
23       6.42  100.3   417.7  4.36 14.9     6.89 251.9   536.8  1.31  9.3     6.26   57.6   963.3  5.46  8.3
24       2.44   33.7   304.1  6.12 24.3     3.54 168.8   355.7  1.22 14.0     1.85   18.4   648.1  6.26 13.0

25       1.97   35.0   270.0  3.07 26.8     3.50 170.6   341.1  0.77 14.3     1.73    8.4   576.0  5.82 14.9
26       5.22   65.7   388.0  2.74 17.5     7.30 223.0   536.0  1.14  9.8     4.06   38.1   908.6  1.04  9.0
27       3.25   49.4   343.2  5.43 20.6     4.19 179.9   389.0  1.35 13.0     1.94   23.1   751.4  7.93 11.2

28       2.59   35.6   290.7  3.02 25.0     4.41 174.0   365.5  0.79 13.6     1.94   13.6   644.7  5.82 13.2
29       4.51   55.0   410.9  4.76 17.3     6.43 234.9   483.5  1.07 10.2     3.02   47.4   911.5  4.92  8.9
30       2.47   32.1   310.6  5.64 24.1     3.63 174.2   365.6  1.28 13.6     1.87   28.1   669.4  6.83 12.3

31       2.17   47.1   284.5  2.57 24.3     3.49 181.4   376.2  0.83 13.2     2.00   12.5   610.7  6.44 13.9
32       5.04   57.7   378.3  3.49 18.3     6.74 216.0   529.2  1.14 10.0     4.06   38.2   896.4  4.24  9.2


SUM    2.25   30.8   290.2  3.03 25.7     3.74 169.8   362.0  0.89 13.9    2.08   26.7   646.7  4.98 12.8
BAG    2.64   54.8   321.6  4.23 21.3     3.80 191.6   395.8  0.89 12.5    2.14   30.6   716.9  5.68 11.5


33       0.87    6.9    69.1  0.38  107     1.16  50.1   129.5  0.21 41.9     0.75   15.5   160.9  0.42 47.3
34       2.93   70.1   592.9  0.67 12.5     7.06 295.4   900.1  0.71  6.4     6.91  186.0  1707.8  1.25  4.4
35       0.91   29.6   505.0  2.74 16.0     4.85 188.4   717.8  0.74  8.6     3.10   88.3   886.5  0.73  8.6
36       0.94   19.1   285.2  0.46 27.9     2.23  87.3   322.3  0.24 19.0     1.27   44.0   686.0  0.21 11.7

37       0.83   10.5   229.3  1.17 35.7     2.06  97.8   268.8  0.29 20.7     1.76    7.4   476.1  1.07 18.0
38       0.49    3.2   206.3  0.44 41.7     1.88 107.6   196.9  0.23 23.9     1.52    7.0   480.9  2.75 17.9
39       0.43    1.8   225.2  1.70 38.7     2.73 154.4   290.7  0.51 16.4     1.03    6.7   548.9  5.85 15.8
```

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX D, CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

HOUSTON

	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID
	013	1973	BUIC	ELEC	455	014	1973	CADI	DEVI	472	015	1973	CAPR	CAPR	122
MODE NO.	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG
1	4.17	53.3	803.6	9.00	9.9	4.74	41.7	957.8	6.34	8.5	6.86	24.2	474.5	2.69	16.6
2	5.45	27.1	872.9	4.56	9.5	4.27	33.5	956.1	2.19	8.7	5.21	33.1	428.3	2.12	17.9
3	8.32	24.8	1387.1	4.95	6.1	7.65	62.8	1453.6	2.88	5.6	9.25	77.3	527.0	1.62	13.1
4	3.89	14.0	829.5	4.92	10.3	3.00	23.8	749.7	3.88	11.1	3.00	29.5	387.1	2.08	20.0
5	2.78	12.2	688.8	6.80	12.4	2.12	11.4	651.1	4.65	13.1	1.85	6.7	369.3	3.82	23.0
6	2.26	6.6	600.6	3.91	14.4	1.53	5.6	706.4	4.14	12.3	1.64	10.0	306.4	2.00	27.1
7	3.35	104.8	685.0	5.73	10.3	2.17	77.1	653.0	5.95	11.4	3.28	22.0	366.3	3.43	21.6
8	2.53	51.4	663.5	5.32	11.8	2.26	40.3	774.6	3.77	10.5	2.35	43.7	319.5	3.15	22.4
9	2.49	33.7	657.0	8.25	12.4	2.50	26.2	669.2	5.20	12.4	2.37	18.6	349.6	4.23	23.0
10	2.29	14.6	686.6	6.37	12.4	2.46	11.6	813.0	3.57	10.6	1.99	19.1	327.7	2.60	24.4
11	3.19	103.9	784.2	8.13	9.3	2.53	43.9	793.4	5.84	10.2	3.48	62.4	364.7	3.41	18.7
12	2.92	30.7	887.5	8.62	9.4	2.81	17.6	1005.2	5.46	8.5	2.83	41.2	415.9	3.51	18.1
13	3.56	90.0	884.9	10.14	8.6	2.85	48.7	924.7	7.25	8.7	4.78	83.5	375.3	3.84	17.0
14	2.08	20.1	643.6	6.31	13.0	1.83	13.5	813.9	3.71	10.6	2.35	44.6	307.0	2.35	23.1
15	2.86	12.4	700.9	3.82	12.2	3.39	12.3	799.3	2.43	10.7	6.01	46.8	328.2	1.42	21.1
16	6.54	17.3	1589.4	7.09	5.4	6.40	27.5	1795.0	2.82	4.8	13.91	117.3	655.6	1.75	10.0
17	3.24	53.7	757.6	7.78	10.4	2.32	33.3	775.5	5.01	10.6	4.80	39.7	333.2	5.16	21.6
18	2.58	22.0	766.6	5.35	11.0	2.05	14.6	813.6	3.09	10.5	2.96	15.5	389.3	3.08	21.0
19	2.70	43.5	662.0	5.76	12.0	1.96	24.9	654.6	4.65	12.7	3.14	30.8	312.7	3.44	23.9
20	3.12	31.0	892.9	5.39	9.3	2.63	20.0	1367.9	3.68	6.3	2.78	17.1	433.4	3.46	18.9
21	4.19	187.5	783.6	5.04	8.1	2.74	132.8	782.6	5.05	8.9	3.88	85.5	341.3	3.11	18.2
22	2.98	54.1	722.7	5.10	10.9	3.17	44.9	942.2	4.32	8.7	2.80	63.5	369.1	2.61	18.6
23	4.72	52.8	1087.8	8.30	7.5	4.46	43.1	1104.3	5.51	7.5	7.23	78.4	447.8	3.61	14.9
24	2.62	43.8	692.7	7.96	11.5	2.02	22.7	689.7	5.33	12.1	1.82	20.4	354.5	4.28	22.6
25	2.05	20.[illegible]	620.2	6.33	13.5	1.90	17.3	692.2	4.55	12.2	1.42	16.9	331.8	3.11	24.5
26	3.81	17.4	753.2	5.21	8.9	4.60	24.1	1053.8	3.64	8.0	6.87	37.9	480.0	1.99	15.8
27	3.10	76.6	834.8	9.16	9.2	2.44	55.2	833.7	6.07	9.6	2.43	32.4	399.9	7.22	19.4
28	2.34	20.1	689.5	5.72	12.2	2.47	16.8	851.9	4.02	10.0	2.02	14.9	337.3	2.87	24.2
29	4.22	32.7	1017.1	8.58	8.2	3.77	54.7	973.9	5.16	8.3	5.52	68.8	422.9	3.14	16.2
30	2.81	70.8	720.0	7.69	10.6	2.04	53.8	684.4	5.11	11.4	2.29	32.2	351.8	2.70	21.7
31	2.31	45.8	680.1	5.45	11.7	2.00	28.2	803.7	4.28	10.4	2.18	55.0	329.2	2.13	21.0
32	3.95	32.0	965.0	5.21	8.6	4.54	34.1	1144.7	5.78	7.3	6.02	54.5	524.9	0.99	14.1
SUM	2.38	35.0	718.1	6.38	11.4	1.92	25.2	750.9	3.49	11.1	2.01	27.3	348.7	2.66	22.3
BAG	2.95	56.8	814.3	7.19	9.7	2.34	36.0	829.5	4.38	9.9	2.72	43.7	366.2	3.25	20.0
33	0.69	8.1	165.0	0.03	49.3	0.92	10.5	227.0	0.46	36.0	0.69	14.7	34.9	0.02	147
34	4.32	22.6	1928.1	0.39	4.5	3.42	24.4	2109.4	0.84	4.1	6.38	206.9	552.2	0.96	9.9
35	1.76	9.8	1193.8	0.22	7.3	2.96	25.0	1171.9	1.04	7.3	2.54	63.7	350.6	0.15	19.3
36	1.08	4.2	795.9	0.97	11.0	1.02	7.0	796.6	0.38	10.9	1.28	26.6	344.5	0.34	22.7
37	1.33	4.1	529.9	2.79	16.4	0.97	5.1	496.3	1.06	17.5	0.21	5.8	381.9	1.21	22.7
38	1.21	4.3	578.9	2.75	15.1	0.56	3.6	508.9	1.79	17.2	0.22	3.9	254.6	0.81	34.0
39	1.30	7.2	627.7	8.82	13.8	0.55	4.4	584.3	1.54	15.0	0.20	2.2	300.9	2.20	29.1

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX D,CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

HOUSTON

```
           VEH  YEAR  MAKE  MODL  CID        VEH  YEAR  MAKE  MODL  CID        VEH  YEAR  MAKE  MODL  CID
           ---  ----  ----  ----  ---        ---  ----  ----  ----  ---        ---  ----  ----  ----  ---
           016  1973  CHEV  VEGA  140        017  1973  CHEV  VEGA  140        018  1973  CHEV  CHEL  307
MODE
NO.      HC     CO    CO2    NOX   MPG      HC     CO    CO2    NOX   MPG      HC     CO    CO2    NOX   MPG
---------------------------------------------------------------------------------------------------------------
 1       4.33   82.9  442.1  1.98 15.1      3.91   36.4  518.1  4.85 15.1      9.33   50.0  711.8  3.66 10.8
 2       7.16   85.1  508.1  2.20 13.4      4.53   42.2  413.8  4.26 17.9      5.89   28.2  932.4  4.65  8.8
 3      10.09  101.5  581.0  1.43 11.5      7.84   58.7  614.9  2.73 12.1      6.78   51.0  831.7  4.00  9.2

 4       3.77   56.4  360.1  2.80 19.3      3.40   21.0  411.8  5.13 19.5      6.77   21.6  723.1  3.36 11.4
 5       2.28   22.1  390.5  3.89 20.5      2.24   22.9  378.4  5.74 21.1      3.51   13.0  649.3  4.47 13.0
 6       2.24   31.4  368.6  2.54 20.9      2.00   18.0  303.5  3.79 26.2      4.14   17.9  540.5  3.34 15.3

 7       2.47   26.5  400.9  4.89 19.7      2.05   39.9  418.3  7.51 18.2      4.99   66.4  426.4  4.13 16.2
 8       2.64   47.9  362.6  3.17 19.9      1.90   29.4  362.3  5.00 21.4      3.58   49.8  522.3  4.16 14.5
 9       2.76   29.3  354.2  4.23 21.7      1.90   34.5  379.2  7.02 20.2      3.90   27.4  443.2  6.57 17.8

10       2.76   42.5  328.7  2.83 22.0      1.92   23.2  370.4  5.15 21.5      3.73   15.0  543.4  4.83 15.3
11       2.79   56.3  385.8  3.87 18.4      1.98   52.3  423.8  6.47 17.3      6.03   77.4  511.7  5.19 13.6
12       3.30   69.0  411.1  3.14 16.7      2.20   33.3  442.5  5.94 17.7      4.84   36.0  683.1  5.68 11.8

13       3.93   68.5  454.2  4.01 15.5      2.18   49.7  490.3  6.71 15.4      7.49   86.6  618.7  6.85 11.4
14       2.58   55.9  307.7  2.24 22.0      1.63   27.7  322.7  4.11 23.9      3.74   22.7  533.5  4.70 15.3
15       6.90   81.7  296.0  1.23 19.9      2.41   33.6  310.0  2.80 24.0      7.86   18.0  453.3  2.54 17.5

16      16.80  222.0  565.9  1.52  9.2      6.09   85.7  628.0  3.17 11.3     25.15   50.0 1025.6  3.32  7.5
17       4.03   82.3  399.0  2.86 16.4      2.09   32.5  399.8  5.12 19.4      6.79   32.4  497.0  5.31 15.6
18       4.12   74.9  329.7  1.54 19.3      2.53   48.9  347.0  3.12 20.5      4.20   18.5  926.2  3.76  9.2

19       5.20   73.2  337.9  2.56 18.9      2.13   39.9  386.5  4.51 19.5      6.14   12.7  520.6  4.87 15.8
20       5.15   89.3  371.4  1.57 16.8      2.98   41.3  392.0  4.71 19.0      5.57   20.5 1086.4  4.39  7.8
21       4.00   91.5  390.9  2.77 16.2      2.16   55.0  455.3  6.82 16.2      7.63   88.2  560.7  5.27 12.3

22       4.54  100.3  344.1  2.06 17.2      2.09   39.7  411.5  5.05 18.5      5.46   58.7  635.3  4.36 11.9
23       7.89  133.2  418.0  2.72 13.6      2.99   36.7  518.7  6.00 15.2      9.60   53.2  726.8  5.49 10.6
24       3.05   52.0  375.1  3.11 19.0      1.67   36.2  385.6  6.23 19.8      4.20   31.7  582.4  6.16 13.7

25       2.53   64.4  293.2  1.94 22.1      1.47   21.4  335.5  4.49 23.7      3.44   19.7  518.6  4.29 15.8
26      10.16  132.1  398.8  1.45 13.9      3.29   52.7  444.8  3.67 16.5     10.37   21.5  633.6  4.14 12.7
27       4.76   79.2  427.1  3.09 15.7      1.73   34.2  437.6  6.59 17.9      6.16   48.5  313.2  6.45 21.7

28       3.39   72.1  285.4  1.85 21.7      1.81   22.4  356.6  4.32 22.3      4.74   20.1  331.0  4.15 23.5
29      10.40  134.2  380.9  2.19 14.2      2.81   28.9  481.1  7.44 16.6      9.08   33.2  615.7  4.37 12.7
30       3.84   62.6  377.3  3.61 18.2      1.64   34.4  399.9  7.67 19.3      5.38   43.2  579.6  5.20 13.4

31       2.94   79.5  311.8  1.65 19.9      1.55   29.1  346.0  4.11 22.4      4.40   38.6  592.8  4.26 13.3
32      10.01  135.2  382.3  1.29 14.2      3.25   53.7  444.3  3.89 16.5     11.70   52.3  679.3  4.03 11.1


SUM     3.09   52.5   336.8  2.83 20.7     1.73   25.9   379.8  5.74 20.8     3.93   30.3   594.3  4.46 13.6
BAG     3.36   68.4   361.1  2.73 18.5     1.73   39.0   426.7  5.71 18.0     5.49   43.6   630.5  5.11 12.4


33       1.68   27.4  101.1  0.60 59.4      0.42    7.4   66.6  0.02  111      1.08    5.7   61.3  0.07  120
34       6.19  272.0  550.0  0.45  8.9      4.52   82.8  957.1  0.54  8.1     12.76   16.4 1142.1  1.24  7.3
35       5.25  138.2  391.6  1.29 14.2      1.92   37.9  409.2  0.44 18.7      4.11   10.7 1070.8  1.03  8.1
36       1.63   60.6  280.8  0.19 23.3      1.49   38.3  327.9  0.73 22.6      1.19    6.7 1024.2  0.76  8.5

37       1.17   20.3  229.9  1.33 33.4      1.01   10.4  273.2  3.03 30.3      0.58    6.1  650.1  1.03 13.4
38       0.96   10.1  248.5  2.27 33.2      1.01    7.0  311.2  5.13 27.3      0.85   13.0  751.1  3.05 11.5
39       1.50   19.5  259.3  3.59 30.1      1.00    6.0  356.3  8.44 24.1      1.57   17.2  504.4  5.58 16.5
```

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX D,CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

HOUSTON

	VEH 019	YEAR 1973	MAKE CHEV	MODL NOVA	CID 307	VEH 020	YEAR 1973	MAKE CHEV	MODL MONT	CID 350	VEH 021	YEAR 1973	MAKE CHEV	MODL CAMA	CID 350
MODE NO.	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG
1	2.80	12.8	702.0	3.70	12.1	6.83	71.3	845.6	4.69	9.1	3.66	28.5	803.4	4.57	10.3
2	1.34	9.1	726.7	2.01	11.9	5.34	50.4	853.9	1.73	9.3	3.75	15.6	846.1	2.07	10.1
3	1.89	6.9	1118.9	2.91	7.8	6.40	48.3	1191.3	1.83	6.9	7.40	13.8	1196.8	1.62	7.1
4	1.81	6.9	601.1	2.17	14.4	2.62	20.9	599.9	1.92	13.8	3.06	7.0	741.0	2.94	11.7
5	3.00	10.0	481.8	3.73	17.5	2.03	14.3	475.0	3.10	17.6	2.32	7.6	614.6	5.18	14.0
6	2.04	7.7	445.6	2.60	19.1	1.89	17.7	628.5	1.98	13.4	2.16	5.4	571.2	2.25	15.1
7	2.48	80.7	474.5	3.11	14.6	2.45	87.0	467.8	2.32	14.5	2.80	84.1	613.3	4.44	11.8
8	2.81	46.4	470.0	3.47	16.1	2.27	65.6	707.1	2.71	10.9	2.25	29.1	621.8	2.96	13.2
9	3.55	38.4	488.5	4.35	15.8	2.25	64.5	456.0	2.36	15.7	2.27	33.4	588.1	5.68	13.7
10	2.79	21.8	509.9	3.47	16.0	2.05	43.9	680.3	2.22	11.7	2.25	9.8	625.4	3.00	13.7
11	2.36	101.8	522.7	2.97	12.9	3.09	128.0	522.9	2.12	12.1	3.23	111.2	611.7	4.88	11.1
12	3.55	37.1	642.6	4.36	12.5	3.23	92.1	756.6	2.93	9.7	3.18	29.3	769.1	3.40	10.8
13	4.02	122.3	603.7	3.13	11.0	4.04	127.4	690.2	2.80	9.8	3.55	104.7	674.3	5.49	10.4
14	2.45	32.0	478.8	3.11	16.5	2.29	67.2	633.1	1.89	11.9	2.11	20.2	578.6	2.52	14.4
15	3.96	16.6	528.0	2.35	15.7	2.64	44.4	694.3	1.07	11.5	3.46	12.0	614.0	1.08	13.8
16	9.08	19.4	1285.8	3.12	6.6	6.20	90.2	1559.0	1.86	5.2	7.12	18.4	1354.8	0.95	6.3
17	2.91	28.4	595.1	3.80	13.7	2.74	35.1	598.4	3.19	13.4	2.57	39.5	573.3	5.91	13.8
18	2.62	17.5	554.5	2.66	15.0	2.53	59.6	666.1	1.98	11.6	1.88	14.4	681.5	2.30	12.5
19	2.40	22.1	539.2	3.00	15.3	2.48	44.4	600.4	2.87	13.1	2.10	40.0	553.6	5.06	14.2
20	3.04	18.9	676.5	3.04	12.4	2.66	54.5	768.2	1.92	10.3	2.64	16.4	797.9	2.49	10.7
21	3.37	122.8	527.7	2.23	12.1	4.22	195.6	581.3	1.57	9.8	3.10	138.9	626.3	2.57	10.4
22	3.28	60.5	634.3	2.92	12.0	2.61	101.9	327.0	1.95	17.9	2.94	36.1	712.6	2.25	11.4
23	4.49	37.2	761.5	3.54	10.6	3.75	66.3	209.7	3.85	27.2	4.59	27.6	823.6	4.07	10.1
24	2.37	44.0	455.1	3.94	16.7	2.62	96.5	305.8	2.84	19.1	1.90	34.3	571.9	5.00	14.0
25	2.02	23.7	526.2	2.93	15.6	2.26	55.8	180.8	1.73	32.2	1.70	19.4	591.7	2.65	14.1
26	4.70	22.9	810.8	3.27	10.3	3.75	51.5	155.7	1.55	35.7	5.08	18.5	882.5	1.57	9.6
27	3.16	111.1	529.3	3.34	12.4	3.54	126.9	400.0	2.91	14.5	2.65	65.5	637.1	5.08	11.9
28	2.68	30.8	577.1	2.77	14.0	2.29	53.6	172.5	1.71	33.6	1.85	19.3	664.2	2.56	12.7
29	3.94	32.5	734.5	3.12	11.1	3.37	48.0	145.8	3.32	38.3	3.08	17.8	825.4	4.01	10.3
30	2.40	57.6	463.8	4.01	15.8	2.91	75.0	242.7	2.46	24.0	2.20	61.3	579.3	4.55	13.0
31	2.06	30.7	549.0	2.30	14.7	2.44	95.7	303.7	1.70	19.2	1.93	40.0	617.7	2.67	12.9
32	4.26	26.2	794.0	2.81	10.5	3.83	83.9	266.3	1.45	21.6	3.81	33.1	864.0	2.23	9.6
SUM	2.21	36.3	516.2	2.75	15.3	2.15	56.2	539.3	2.12	14.0	1.77	28.8	612.3	3.07	13.4
BAG	2.25	53.2	567.5	3.05	13.5	2.74	98.6	667.9	2.23	10.7	2.06	42.9	664.8	3.63	12.0
33	0.74	8.1	182.8	0.60	44.8	0.40	5.0	147.6	0.02	56.6	0.28	0.8	109.4	0.07	79.6
34	5.54	13.2	1678.9	3.23	5.2	3.79	62.3	1829.4	0.33	4.6	2.47	5.1	1333.4	0.61	6.6
35	3.67	21.8	948.4	1.92	8.9	1.03	19.2	1006.2	0.27	8.5	0.62	9.4	954.3	0.69	9.1
36	1.56	4.3	576.5	0.80	15.1	0.70	17.5	715.4	0.64	11.9	0.57	7.0	621.5	0.42	14.0
37	1.32	4.7	369.4	0.89	23.3	1.18	16.7	508.7	0.40	16.5	0.71	3.9	488.8	0.47	17.9
38	0.85	6.7	357.9	1.69	23.9	0.81	9.8	512.1	1.36	16.7	0.48	3.5	440.5	1.32	19.8
39	0.75	15.5	398.6	2.54	20.9	0.91	21.6	567.6	2.81	14.7	0.32	4.8	549.6	3.38	15.9

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX D,CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

HOUSTON

	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID
	022	1973	CHEV	MALI	350	023	1973	CHEV	CAPR	400	024	1973	CHRY	NEWP	400
MODE NO.	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG
1	16.74	68.9	740.2	6.07	9.8	3.06	59.2	1077.7	6.75	7.5	3.17	48.8	941.1	7.04	8.6
2	13.07	52.7	776.1	3.84	9.9	2.41	56.2	819.3	2.75	9.7	3.45	41.1	822.9	3.94	9.9
3	18.66	51.2	1100.0	2.49	7.2	5.07	116.1	1207.0	4.15	6.3	6.66	56.3	1352.9	3.34	6.1
4	7.16	38.9	719.6	4.12	11.0	3.04	28.4	726.8	3.39	11.4	2.53	17.7	758.2	4.70	11.2
5	4.29	10.4	642.6	6.38	13.2	1.93	13.7	636.2	3.18	13.4	1.79	13.5	652.3	6.00	13.1
6	4.16	5.6	568.9	4.30	15.0	1.71	9.3	579.2	4.66	14.8	1.46	8.4	576.2	3.92	14.9
7	5.18	25.6	657.8	7.69	12.4	3.18	115.3	640.3	3.07	10.7	2.40	122.2	661.6	6.05	10.3
8	8.06	32.5	592.1	5.19	13.3	7.67	61.8	608.4	3.95	12.2	1.93	35.4	685.2	4.25	11.9
9	5.22	18.5	622.6	8.32	13.3	4.23	66.5	625.3	5.69	11.9	1.78	50.9	644.5	7.40	12.2
10	4.39	11.5	604.6	5.43	13.9	2.78	26.5	647.5	4.26	12.7	1.58	16.5	691.9	4.57	12.3
11	4.70	56.0	662.0	7.25	11.6	3.00	112.3	711.1	5.09	9.9	3.10	158.4	701.3	5.88	9.2
12	4.63	22.2	742.2	6.49	11.2	2.37	36.8	865.7	6.13	9.5	2.34	37.1	877.4	5.95	9.4
13	5.19	50.4	706.9	8.83	11.1	2.75	113.2	814.1	19.94	8.9	2.25	29.5	817.0	10.21	10.2
14	3.23	16.0	547.7	5.12	15.2	1.92	39.1	617.6	4.09	13.0	1.28	11.9	629.2	4.89	13.6
15	6.98	16.1	577.2	2.32	14.2	2.40	36.8	606.9	1.93	13.2	1.92	17.7	668.4	2.56	12.6
16	16.71	91.9	1237.0	2.36	6.2	6.00	108.1	1653.8	2.94	4.8	5.40	63.1	1522.5	3.61	5.4
17	4.76	37.5	667.7	7.84	12.0	2.08	49.3	704.6	6.30	11.3	2.35	45.6	681.3	6.55	11.7
18	3.99	11.9	606.6	4.09	13.9	1.64	21.2	754.9	6.16	11.2	1.80	23.0	628.8	4.23	13.2
19	4.32	27.6	639.6	6.50	12.7	1.75	33.1	621.5	5.52	13.1	2.21	47.6	650.1	5.29	12.1
20	4.91	18.0	720.3	4.77	11.6	1.88	26.9	907.9	4.47	9.3	2.46	36.8	721.6	4.56	11.3
21	4.23	64.1	683.4	7.86	11.1	3.87	192.2	742.4	3.46	8.4	3.41	127.3	670.4	4.99	10.1
22	4.05	29.2	678.3	5.38	12.0	2.08	69.1	802.9	4.55	9.7	2.26	58.8	757.9	3.60	10.4
23	8.55	45.6	828.7	7.48	9.6	3.11	65.4	1047.4	6.66	7.7	3.31	48.2	958.5	6.66	8.5
24	3.19	16.6	601.4	8.03	13.9	1.71	45.2	661.6	5.45	12.0	1.86	31.7	619.5	6.58	13.1
25	2.83	12.5	564.9	5.39	15.0	1.35	33.2	645.4	5.05	12.6	1.54	25.7	613.0	3.66	13.5
26	10.01	25.6	816.2	3.49	10.0	2.59	58.6	982.5	3.33	8.2	3.27	44.6	893.1	2.93	9.1
27	3.80	30.8	343.5	1.47	22.0	1.75	53.8	786.1	7.35	10.1	2.39	44.8	696.5	6.91	11.5
28	3.74	11.6	616.1	5.07	13.7	1.26	19.1	664.9	4.77	12.7	1.97	37.3	666.7	3.57	12.1
29	7.34	44.4	760.5	5.83	10.4	2.44	53.9	976.8	4.18	8.3	3.10	42.8	894.2	6.70	9.1
30	3.12	26.3	601.5	7.48	13.6	1.91	71.6	662.6	4.44	11.4	2.04	59.0	625.4	7.02	12.2
31	2.87	21.2	604.3	5.73	13.7	1.63	55.2	673.9	4.98	11.6	1.78	25.0	635.5	3.93	13.0
32	9.44	45.8	815.4	7.44	9.7	2.62	64.7	980.3	3.18	8.1	3.51	46.9	882.9	3.37	9.2
SUM	3.50	21.3	563.4	5.34	14.6	1.83	43.8	668.5	5.15	11.9	1.81	36.9	671.1	5.21	12.1
BAG	3.50	28.7	648.1	6.61	12.6	2.74	67.2	731.5	4.71	10.5	2.01	47.1	731.5	5.28	10.9
33	1.23	9.1	162.4	1.10	49.2	0.59	23.5	121.7	0.05	55.3	0.68	20.6	150.2	0.03	48.0
34	6.08	48.0	1170.7	1.53	7.0	6.29	195.2	1552.8	0.83	4.7	5.98	110.4	1948.9	1.27	4.1
35	3.39	41.7	954.1	1.97	8.6	1.12	46.1	935.9	0.94	8.8	2.06	31.3	1033.9	0.55	8.1
36	1.56	28.4	569.2	0.18	14.3	0.82	30.3	616.6	0.63	13.3	1.98	41.1	662.0	0.39	12.1
37	1.38	9.9	399.7	1.28	21.1	0.86	16.3	476.8	0.52	17.6	1.11	13.4	487.8	1.11	17.3
38	1.06	5.8	381.0	3.31	22.6	0.78	7.1	485.0	3.22	17.8	0.93	3.6	497.9	7.60	17.5
39	1.02	4.5	405.3	6.09	21.4	0.53	5.1	586.4	7.07	14.9	0.78	10.1	624.8	5.99	13.8

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX D,CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

HOUSTON

	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID
	025	1973	DATS	DFLU	71	026	1973	DODG	DART	225	027	1973	DODG	CHAR	318
MODE NO.	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG
1	4.64	68.0	267.3	3.20	22.8	4.05	33.7	634.7	6.57	12.7	5.34	55.8	729.2	4.03	10.6
2	6.17	45.9	368.7	3.46	19.3	4.07	29.8	620.6	4.61	13.0	5.94	133.5	675.3	3.55	9.8
3	9.23	34.4	420.6	3.31	17.6	6.71	23.8	979.3	5.26	8.6	10.79	185.0	1043.4	2.41	6.5
4	4.26	36.4	319.1	4.38	22.8	2.86	10.9	535.9	5.82	15.8	4.31	59.2	612.9	1.94	12.3
5	2.46	20.3	327.1	4.93	24.2	2.15	11.5	435.9	7.98	19.3	2.81	25.0	540.4	2.84	15.1
6	2.55	21.8	268.4	2.58	28.6	1.90	10.9	411.4	5.07	20.4	2.37	14.2	462.7	3.47	18.0
7	2.01	23.1	308.0	4.62	25.3	2.49	35.4	453.1	10.99	17.2	2.92	31.5	477.4	5.24	16.6
8	3.19	68.1	321.6	3.11	20.2	1.90	20.0	476.2	6.00	17.3	2.33	40.1	434.7	3.88	17.6
9	2.63	29.5	326.1	4.97	23.3	2.03	30.7	442.8	8.21	17.8	2.32	34.8	450.7	4.21	17.3
10	2.73	33.0	315.4	3.70	23.6	1.90	13.9	470.6	6.04	17.8	2.47	23.3	508.4	3.96	16.1
11	2.95	61.6	335.8	3.94	20.1	2.64	65.0	480.9	7.45	15.0	3.10	65.8	563.5	5.63	13.1
12	3.83	71.9	385.9	3.81	17.4	2.48	28.0	587.7	7.65	13.9	3.11	40.4	637.1	5.69	12.5
13	3.68	80.0	373.2	4.04	17.4	3.03	75.2	540.1	7.73	13.3	3.57	70.0	626.5	7.17	11.9
14	2.89	52.6	296.8	3.21	22.8	1.77	19.6	424.5	5.41	19.1	2.21	28.5	459.8	3.31	17.3
15	6.15	37.5	263.9	2.05	25.9	2.51	12.8	475.6	3.36	17.6	3.47	46.0	503.0	1.66	15.1
16	10.83	85.3	459.4	2.65	14.1	6.54	37.0	1815.7	4.50	4.7	9.07	160.3	1030.3	2.00	6.8
17	3.11	66.5	326.6	3.01	20.1	2.88	61.3	499.1	5.58	14.7	3.20	71.8	523.4	5.06	13.7
18	2.53	42.6	300.2	2.73	23.7	2.62	39.4	411.1	4.96	18.4	2.71	25.8	548.6	3.85	14.8
19	3.11	43.4	285.1	2.80	24.4	2.86	56.0	436.2	3.54	16.6	2.83	56.1	502.4	4.56	14.8
20	2.98	48.5	325.1	3.01	21.6	3.17	44.9	829.9	4.80	9.7	3.35	34.3	681.0	4.63	11.9
21	2.63	60.8	275.9	3.05	23.4	2.91	68.6	536.5	8.47	13.6	3.34	103.6	619.5	6.88	11.2
22	3.31	86.0	340.2	2.65	18.3	2.55	34.4	516.5	6.25	15.3	3.25	91.5	579.0	3.59	12.1
23	5.62	77.6	335.9	2.51	18.7	3.88	48.7	702.2	6.65	11.2	4.95	82.7	802.7	4.23	9.4
24	2.29	49.1	316.1	3.52	22.2	2.27	55.4	446.0	6.43	16.4	2.40	26.4	536.3	5.83	15.2
25	2.09	41.0	309.5	2.95	23.3	1.87	23.9	398.6	5.41	20.1	2.11	35.2	495.7	3.68	15.9
26	7.17	52.0	363.2	2.52	19.0	3.74	26.5	598.9	4.15	13.6	5.32	89.7	728.8	2.93	10.0
27	3.11	78.5	347.7	3.72	18.5	2.81	78.0	518.5	6.35	13.7	2.88	42.5	601.1	6.71	13.1
28	2.19	43.7	309.1	2.65	23.1	2.18	20.4	436.1	6.03	18.7	2.78	44.1	525.0	3.62	14.7
29	4.53	63.4	291.3	3.20	21.9	3.48	22.4	672.2	7.94	12.4	4.43	44.6	752.8	4.22	10.6
30	1.93	37.5	316.6	4.07	23.3	2.46	62.4	450.4	6.98	16.0	2.42	19.2	553.7	6.18	15.0
31	2.81	67.2	342.0	2.72	19.4	1.85	24.6	438.5	5.08	18.4	2.30	76.0	509.3	3.55	14.0
32	6.95	74.9	358.2	2.26	17.8	3.81	42.8	610.9	4.05	12.9	4.97	90.5	737.9	2.85	9.9
SUM	2.35	35.5	313.2	3.60	23.6	2.02	27.8	472.9	6.93	17.0	2.42	37.3	520.3	4.19	15.1
RAG	3.37	60.4	334.5	3.50	20.2	1.88	41.9	521.8	6.24	14.9	2.45	49.9	578.3	4.33	13.4
33	1.48	11.2	18.1	0.01	219	0.52	11.6	95.8	0.08	76.7	0.56	16.8	111.9	0.02	63.4
34	5.23	138.6	340.5	0.27	15.4	5.43	62.1	1464.2	5.57	5.6	6.98	232.2	1331.5	0.83	5.2
35	2.24	53.8	223.4	0.22	28.2	2.09	18.3	616.2	0.85	13.6	3.49	108.4	746.6	0.42	9.6
36	1.51	31.3	212.6	0.36	33.3	1.24	11.0	466.8	1.05	18.2	2.23	74.8	465.4	0.35	15.0
37	0.95	5.9	257.2	1.31	35.6	1.10	3.1	333.8	3.55	25.9	1.36	13.5	395.4	0.80	21.1
38	0.61	1.9	282.3	2.95	30.9	1.12	3.7	368.4	6.48	23.5	1.17	3.6	403.0	4.00	21.5
39	0.61	2.6	332.4	5.83	26.2	1.04	4.3	434.4	10.67	20.0	1.36	8.1	438.1	4.85	19.5

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

```
                                  APPENDIX D.CONT'D

                    LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

                                       HOUSTON

         VEH  YEAR  MAKE  MODL  CID       VEH  YEAR  MAKE  MODL  CID       VEH  YEAR  MAKE  MODL  CID
         ---  ----  ----  ----  ---       ---  ----  ----  ----  ---       ---  ----  ----  ----  ---
         028  1973  FORD  STAW  122       029  1973  FORD  MAVE  200       030  1973  FORD  MAVE  302

MODE
NO.     HC    CO    CO2    NOX   MPG      HC    CO    CO2    NOX   MPG       HC    CO    CO2    NOX   MPG
----------------------------------------------------------------------------------------------------------
 1     3.28  41.1  382.1  3.06 19.4     4.38  40.9  584.3  4.85 13.4      8.01  29.7  497.9  1.87 15.6
 2     4.82  49.4  488.8  3.11 15.3     4.65  32.7  635.2  3.31 12.7      6.63 105.0  693.7  1.41 10.1
 3     6.48  71.2  569.1  2.40 12.7     6.34  67.4  886.4  2.88  8.8     11.93 117.8  940.3  0.77  7.6

 4     3.38  51.2  398.7  2.50 18.1     2.69  25.2  520.0  3.80 15.6      4.56  96.6  581.3  1.24 11.9
 5     1.99  20.9  360.1  3.68 22.2     2.13  21.9  368.3  4.54 21.7      2.94  35.7  561.1  2.84 14.2
 6     2.28  24.5  310.6  2.86 24.9     1.85   7.6  370.9  3.43 22.8      2.77  17.9  503.5  1.73 16.4

 7     1.52  25.6  311.8  4.21 24.9     1.95  33.0  336.1  5.26 22.5      3.23  26.6  564.9  3.46 14.4
 8     2.16  32.0  350.7  3.81 21.8     1.88  20.0  417.3  4.92 19.5      3.54 106.6  513.2  3.68 12.8
 9     1.46  17.1  328.1  6.01 24.7     2.09  31.2  369.2  5.16 20.9      3.64  31.4  554.5  5.73 14.4

10     1.82  15.3  353.5  7.52 23.2     1.88  12.3  420.6  4.31 19.9      3.97  25.9  535.4  3.59 15.1
11     1.88  32.2  337.9  3.82 22.5     2.86  53.4  496.7  6.89 15.0      4.60  51.3  517.3  4.08 14.5
12     2.89  28.9  463.8  6.86 17.1     2.87  19.7  585.8  6.04 15.2      5.13 162.2  639.6  4.38  9.7

13     3.02  45.3  395.2  6.90 18.6     3.26  59.4  498.7  6.91 14.7      5.78  57.2  572.0  4.59 13.0
14     2.40  21.3  338.4  3.93 23.4     2.56  34.8  376.9  3.92 20.2      3.74  68.6  487.5  2.72 14.6
15     3.76  48.2  367.7  2.47 19.5     3.49  57.9  364.9  1.71 19.0      7.12  78.7  523.4  1.10 13.3

16     8.50 133.9  753.7  3.36  9.0     7.32  97.3  874.8  2.41  8.4     20.16 186.4  919.9  2.09  7.0
17     2.49  47.6  345.4  4.94 20.7     3.18  60.5  434.2  4.20 16.5      5.30  86.4  464.0  3.50 14.4
18     3.63  39.5  358.3  3.32 20.5     2.50  21.2  424.0  3.39 19.1      4.14  68.8  607.6  1.74 12.2

19     2.57  44.8  330.5  4.16 21.7     2.55  36.9  370.0  4.03 20.4      5.05  56.3  420.4  1.81 16.9
20     4.89  45.9  423.9  3.81 17.4     3.08  31.8  477.8  3.63 16.5      5.57 145.2  695.0  1.45  9.4
21     2.37  38.8  336.2  6.86 21.9     3.88  79.5  441.4  6.30 15.3      5.69  55.2  530.1  2.56 14.0

22     3.12  36.0  423.4  4.58 18.1     3.25  32.7  510.4  5.39 15.5      5.62 139.9  592.7  2.67 10.7
23     4.25  76.4  437.2  3.46 15.6     4.79  67.0  590.2  5.07 12.5      9.56 103.0  657.0  1.85 10.5
24     1.96  24.1  337.6  4.21 23.3     2.47  34.1  458.5  6.81 17.1      3.63  51.7  500.5  4.43 15.0

25     1.92  20.5  353.8  3.66 22.6     1.89  15.8  390.8  4.72 21.0      3.71  44.3  498.7  3.36 15.3
26     4.95  67.5  536.1  2.95 13.5     4.10  31.2  679.0  4.63 12.0      9.71 107.0  716.6  1.66  9.7
27     2.13  40.9  361.5  4.56 20.5     2.96  46.4  489.4  6.70 15.5      4.39  61.5  554.7  5.34 13.3

28     2.19  21.4  366.4  4.05 21.8     2.17  16.4  417.7  4.59 19.7      5.10  65.8  552.9  2.73 13.2
29     3.59  74.6  398.2  3.06 16.8     3.81  42.8  582.8  6.06 13.4     10.44  99.4  637.0  1.73 10.7
30     1.73  19.9  325.6  5.05 24.5     2.78  37.5  495.0  8.03 15.8      3.66  68.7  544.9  5.25 13.4

31     2.24  22.0  367.2  4.36 21.7     2.04  18.9  425.3  5.23 19.2      4.00  53.6  495.6  3.14 15.0
32     4.90  64.1  535.5  3.85 13.6     4.00  51.4  550.9  3.88 13.8     11.71 118.6  681.8  2.50  9.8


SUM   2.10  25.2  336.4  3.31 23.2     2.19  23.0  444.9  5.17 18.2      4.34  61.1  516.6  2.82 14.2
BAG   2.31  34.0  366.6  4.24 20.8     2.60  37.6  480.1  5.28 16.2      4.58  70.8  570.3  3.36 12.8


33     0.92  15.3  113.6  1.02 63.1     0.19   2.0  108.7  0.03 79.0      3.37  41.4  143.5  0.05 40.5
34     6.14 178.5  598.2  0.18  9.9     4.34  15.2 1186.3  0.50  7.3     15.88 477.7  957.7  0.71  5.0
35     4.23  60.0  597.9  2.63 12.6     0.93   7.3  747.0  0.25 11.7     12.22 247.6  600.3  1.14  8.6
36     2.76  47.3  292.0  0.51 23.7     0.78   4.8  486.2  0.55 17.9      4.17 148.5  386.5  0.24 14.0

37     1.50   8.9  268.2  1.94 30.9     1.39   5.8  439.4  2.52 19.6      2.35  33.6  420.5  0.72 18.5
38     1.01   6.9  210.0  1.03 39.6     1.32   3.2  322.0  3.00 26.8      1.57  28.4  386.7  1.12 20.3
39     0.85   3.5  249.3  0.53 34.5     1.33   3.0  379.0  7.44 22.9      2.44  24.5  425.8  3.08 18.8


EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE . . IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO
```

APPENDIX D,CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

HOUSTON

	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID
	031	1973	FORD	MUST	351	032	1973	FORD	TORI	351	033	1973	FORD	LTD	400
MODE NO.	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG
1	9.37	174.0	432.9	0.76	12.1	5.56	75.3	970.6	5.77	8.0	6.24	150.9	695.0	14.87	9.3
2	9.00	174.5	595.9	0.90	9.9	5.29	34.5	875.6	3.02	9.3	6.65	88.2	946.0	7.47	8.0
3	13.09	207.7	876.3	1.09	7.1	11.88	73.7	1412.6	3.63	5.7	8.38	226.8	1034.5	6.54	6.3
4	6.08	118.2	480.7	1.66	12.9	6.29	21.4	783.1	4.92	10.6	2.88	86.2	439.1	9.45	15.2
5	4.52	94.9	405.6	1.69	15.6	3.74	8.3	588.4	6.40	14.5	1.90	39.1	443.7	13.83	17.4
6	4.04	80.4	406.1	1.60	16.3	3.33	10.3	604.5	2.99	14.1	2.05	17.1	662.3	11.19	12.8
7	4.84	127.2	398.0	1.67	14.5	3.80	68.2	687.5	6.50	11.0	1.81	38.2	451.7	16.04	17.2
8	4.29	131.9	418.9	1.15	13.9	3.25	46.2	685.6	4.24	11.5	2.27	29.1	766.9	14.80	10.8
9	4.73	105.1	374.8	1.74	16.0	2.80	27.4	694.4	8.31	11.9	3.19	31.0	459.4	15.88	17.1
10	4.75	99.7	445.2	1.23	14.4	2.85	18.6	720.2	4.58	11.7	2.60	16.5	778.7	14.92	10.9
11	5.09	161.1	429.6	1.05	12.7	3.59	80.4	703.3	7.53	10.6	2.35	62.0	458.7	19.44	15.7
12	5.78	147.2	556.9	1.32	11.0	3.70	30.8	907.2	5.53	9.2	3.10	27.8	1031.2	18.96	8.2
13	5.93	173.7	498.8	1.27	11.2	3.59	48.5	831.1	9.52	9.7	3.54	63.6	559.3	22.72	13.6
14	2.30	109.3	418.9	1.37	14.8	2.33	18.0	645.4	4.21	13.0	2.27	16.8	660.4	14.76	12.8
15	6.25	124.6	445.5	0.80	13.4	4.11	36.8	700.6	2.54	11.5	6.24	89.0	670.6	7.34	10.7
16	19.38	250.6	990.4	1.23	6.1	11.66	132.5	1569.1	3.15	4.9	11.31	271.7	1276.7	4.72	5.1
17	4.63	158.0	486.7	1.10	11.8	3.88	49.9	687.0	9.02	11.4	2.70	114.1	436.1	17.80	14.2
18	4.51	99.2	463.8	1.74	14.0	3.18	24.8	725.9	3.30	11.5	2.72	31.8	776.8	11.37	10.6
19	4.36	112.6	423.2	1.29	14.5	3.43	47.4	579.4	6.87	13.4	2.61	88.1	1567.6	15.51	5.2
20	5.01	108.1	539.4	1.86	12.2	4.06	42.1	873.7	3.68	9.3	3.23	36.9	921.2	13.27	9.0
21	5.88	230.0	502.4	1.20	10.1	4.21	119.1	741.0	7.52	9.4	2.18	74.9	459.0	18.56	15.2
22	5.72	145.8	494.3	1.37	12.0	3.15	41.9	777.0	4.45	10.4	3.33	29.4	955.6	15.43	8.9
23	8.03	171.0	652.1	1.76	9.4	5.68	75.2	1018.1	6.50	7.7	6.12	152.8	709.6	16.94	9.2
24	4.14	107.2	426.8	0.93	14.6	2.61	26.0	660.6	7.40	12.5	1.81	32.8	462.0	18.21	17.1
25	3.92	89.5	418.1	1.79	15.5	2.09	16.3	634.2	4.44	13.3	2.15	14.0	751.6	14.70	11.4
26	7.96	150.6	666.2	1.42	9.6	5.18	41.7	974.9	3.41	8.4	7.56	140.3	986.3	11.29	7.2
27	4.92	149.3	487.9	1.50	12.0	2.94	38.4	714.5	9.34	11.3	2.33	59.3	572.3	22.16	13.2
28	5.36	101.2	432.2	1.18	14.6	2.52	22.7	690.4	4.09	12.1	3.08	28.0	781.9	14.52	10.6
29	7.57	150.8	594.7	1.82	10.4	5.22	81.1	928.9	5.12	8.3	5.12	166.1	613.8	16.33	10.0
30	4.39	126.3	447.5	1.71	13.5	2.69	39.2	685.4	8.43	11.7	1.77	36.1	459.6	18.67	17.0
31	4.20	99.9	431.7	1.53	14.7	2.34	22.1	656.6	4.92	12.7	2.20	17.7	788.9	15.70	10.8
32	6.78	164.8	639.5	1.34	9.5	5.27	56.6	982.6	3.64	8.2	8.07	125.2	1011.9	11.80	7.2
SUM	4.46	116.6	449.9	1.21	13.7	2.67	30.6	665.6	4.22	12.3	2.58	47.0	639.5	14.55	12.3
AVG	4.45	133.4	474.1	1.33	12.7	2.00	38.7	758.3	5.39	10.8	2.88	48.4	684.0	14.97	11.5
33	2.05	53.5	191.9	0.43	31.4	0.60	12.3	154.3	0.12	50.6	1.02	42.3	125.1	0.05	45.6
34	7.41	212.1	1225.9	0.71	5.6	6.83	142.6	1858.3	1.39	4.2	12.17	572.5	1447.4	0.62	3.7
35	6.91	192.3	935.5	1.04	7.0	3.01	69.5	943.8	0.08	8.4	6.29	298.9	718.3	0.31	7.3
36	3.79	82.9	454.8	0.30	14.9	0.93	10.1	891.7	0.11	9.7	4.29	199.3	478.9	0.21	11.0
37	2.25	60.0	358.7	0.33	19.3	0.92	5.0	589.9	0.43	15.8	1.98	44.1	456.7	3.70	16.7
38	2.41	47.6	306.5	1.54	22.8	1.47	9.3	577.6	1.68	14.9	1.19	3.6	513.3	9.78	17.0
39	3.05	90.2	360.1	0.85	17.4	1.68	13.6	426.3	2.09	19.6	1.54	4.6	605.2	17.18	14.4

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX D,CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

HOUSTON

	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID
	034	1973	FORD	STAN	400	035	1973	MAZD	RX2	70	036	1973	MERC	MARQ	429
MODE NO.	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG
1	4.23	74.1	716.0	5.19	10.5	9.47	40.9	628.9	2.49	12.3	9.87	85.9	650.3	1.91	10.9
2	5.23	19.9	752.3	2.81	11.1	11.84	60.5	661.3	1.59	11.2	8.76	74.8	918.9	3.82	8.3
3	8.96	24.7	1209.1	2.65	7.0	18.92	66.4	751.8	1.90	9.7	10.94	48.6	1099.3	2.28	7.3
4	3.21	37.2	800.0	4.29	10.1	8.25	42.1	552.6	2.27	13.8	4.83	17.9	583.0	1.00	14.2
5	2.06	33.5	773.7	4.81	10.7	4.64	24.5	454.8	3.03	17.4	2.87	20.2	529.6	2.09	15.6
6	2.11	17.4	658.8	2.36	12.8	4.06	23.6	411.7	1.46	19.2	3.23	13.7	579.4	4.81	14.5
7	3.08	151.2	678.4	6.71	9.6	4.31	23.9	414.6	2.29	19.1	3.11	21.6	464.8	1.78	17.5
8	2.70	64.0	803.9	3.30	9.7	3.63	51.6	472.1	1.44	15.7	5.32	113.1	663.8	4.22	10.3
9	4.01	130.2	711.4	3.71	9.6	3.62	24.5	409.8	2.60	19.3	4.08	34.0	489.1	2.22	16.0
10	2.91	37.8	778.8	2.97	10.5	2.68	26.6	505.0	1.45	16.0	4.43	28.5	707.8	6.99	11.6
11	4.90	236.5	758.8	5.64	7.7	5.75	64.2	465.6	1.75	15.2	4.47	59.8	535.2	3.04	13.8
12	3.60	67.2	1009.7	4.19	7.9	3.69	42.1	627.2	2.00	12.6	6.37	63.5	898.9	9.67	8.7
13	5.27	206.1	862.7	5.37	7.4	5.72	57.3	498.1	2.56	14.6	4.70	33.7	669.9	5.02	12.0
14	2.67	53.1	733.0	2.78	10.8	2.89	32.5	471.6	1.42	16.7	3.94	29.7	655.0	7.63	12.4
15	6.51	36.2	694.5	1.98	11.5	6.03	28.3	572.4	1.05	14.0	10.09	28.9	705.1	3.19	11.3
16	11.02	62.5	1361.3	3.08	5.9	21.75	92.5	1317.5	2.08	5.8	16.39	65.9	1501.5	3.89	5.4
17	3.44	59.3	728.1	4.96	10.7	6.00	43.3	506.0	2.39	15.0	2.95	1.2	565.3	1.81	15.4
18	2.87	33.4	744.8	2.56	11.0	3.54	27.1	531.8	1.21	15.2	4.59	26.7	759.1	7.07	10.9
19	4.35	79.7	696.1	3.65	10.6	4.40	27.2	516.3	1.61	15.5	3.75	25.5	486.6	1.54	16.5
20	3.99	54.2	891.9	2.91	9.0	4.84	42.0	605.8	1.11	12.9	5.71	43.4	891.6	7.99	9.1
21	6.19	201.4	760.2	6.19	8.1	7.08	105.2	428.1	1.18	14.4	3.22	96.3	496.3	1.85	13.5
22	3.83	88.9	855.8	3.85	8.8	4.23	52.6	553.6	1.27	13.7	7.92	175.1	824.0	4.33	7.9
23	6.71	70.7	1003.9	5.65	7.8	6.61	42.8	642.1	2.49	12.2	10.08	87.7	632.5	1.95	11.1
24	3.53	71.7	736.8	5.79	10.3	3.64	54.4	426.2	1.43	17.0	2.75	35.3	556.2	3.66	14.3
25	2.31	46.5	741.4	3.44	10.8	2.94	36.2	470.5	1.17	16.5	3.70	35.8	649.8	7.28	12.4
26	6.87	67.9	1062.3	2.74	7.5	6.93	29.6	836.5	1.27	9.8	13.02	45.3	952.0	4.43	8.3
27	4.59	131.7	797.2	6.20	8.7	4.55	46.5	458.8	1.89	14.2	3.29	42.7	653.9	5.47	12.1
28	3.60	45.9	713.9	3.23	11.1	3.19	22.3	516.2	1.39	15.8	4.71	34.5	688.4	6.84	11.7
29	5.11	45.8	964.9	5.70	8.4	5.41	31.8	631.6	3.18	12.7	8.64	48.8	622.0	2.00	12.2
30	3.93	90.8	727.6	6.38	10.1	2.98	38.0	457.9	2.24	16.8	2.55	31.3	549.9	3.20	14.6
31	2.56	73.3	793.8	3.84	9.7	2.73	28.4	515.7	1.54	15.6	3.82	44.1	703.0	6.97	11.3
32	6.56	81.6	1172.1	3.18	6.7	7.56	45.0	822.4	1.49	9.7	11.07	45.3	963.8	5.21	8.3
SUM	3.08	59.3	728.1	5.44	10.7	3.05	29.6	482.7	1.43	16.5	4.55	37.1	566.0	3.59	13.9
HAG	4.08	104.0	847.8	4.20	8.7	4.54	55.5	507.8	1.47	14.6	4.61	58.1	687.4	5.05	11.2
33	0.44	1.3	92.4	0.00	92.5	1.18	7.2	65.0	0.02	110	5.12	16.5	159.4	0.92	44.0
34	4.23	5.3	1102.4	0.50	7.9	18.20	162.8	1133.4	0.84	6.1	10.21	86.1	1324.5	1.54	5.9
35	2.17	8.0	781.6	0.69	11.1	3.92	36.7	1002.2	0.41	8.3	18.84	61.4	901.4	2.99	8.4
36	1.66	8.3	666.7	0.88	13.0	1.82	14.7	651.0	0.36	13.1	3.35	19.1	543.0	0.29	15.2
37	1.40	5.7	533.4	3.80	16.2	0.35	3.2	474.0	0.28	18.5	3.64	11.9	382.5	1.00	21.5
38	1.57	10.4	592.8	3.12	14.5	0.32	6.3	355.1	0.79	24.2	1.41	7.9	351.3	0.89	24.1
39	1.91	11.2	648.1	10.45	13.2	0.33	0.9	406.3	1.39	21.7	2.08	18.6	383.8	2.54	21.2

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX D,CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

HOUSTON

	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID
	037	1973	OLDS	CUTL	350	038	1973	OLDS	DELT	455	039	1973	PLYM	SATE	318
MODE NO.	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG
1	3.25	7.0	619.7	2.65	13.8	4.99	37.9	948.0	11.73	8.7	7.25	148.2	679.5	4.15	9.5
2	4.75	18.9	861.2	2.68	9.8	4.74	31.4	798.8	5.31	10.3	5.77	148.6	722.4	3.14	9.1
3	8.63	13.1	1292.8	1.72	6.6	8.83	55.5	1222.6	4.70	6.6	8.52	231.5	1027.5	2.73	6.3
4	3.40	5.9	703.1	1.98	12.3	3.50	20.2	708.4	6.42	11.8	3.98	83.1	655.4	3.79	11.1
5	2.17	5.0	593.9	2.40	14.6	2.17	6.3	647.1	8.59	13.4	3.28	59.2	670.3	5.24	11.5
6	2.14	4.3	526.6	1.83	16.4	1.85	4.8	562.0	5.90	15.4	2.86	46.4	455.1	3.97	16.5
7	2.77	39.2	579.6	3.42	13.7	2.26	11.9	726.5	11.65	11.8	3.66	48.7	580.2	7.45	13.3
8	2.71	49.6	523.7	2.83	14.5	1.76	13.7	653.9	9.82	13.0	3.15	62.9	525.2	4.95	14.0
9	2.79	16.9	518.5	4.96	16.0	1.98	8.5	668.9	10.93	12.9	3.29	46.8	529.8	7.67	14.5
10	3.08	8.9	568.0	2.98	15.0	1.85	6.5	634.8	8.60	13.6	3.45	46.7	536.6	5.70	14.3
11	2.94	16.5	649.8	6.24	13.0	1.96	13.8	794.8	13.83	10.8	4.32	84.4	624.8	7.45	11.5
12	3.10	10.9	758.8	3.72	11.3	2.23	8.5	823.6	12.26	10.5	4.56	79.1	693.1	7.11	10.7
13	3.35	12.8	774.1	6.69	11.0	2.41	18.0	844.3	14.88	10.1	4.86	90.4	703.1	8.38	10.3
14	2.25	7.5	547.6	2.95	15.7	1.60	6.4	624.8	10.58	13.9	3.54	56.6	511.7	5.66	14.5
15	3.51	8.6	624.9	2.02	13.7	3.35	17.5	624.8	4.59	13.4	5.04	77.9	553.1	2.93	12.8
16	8.19	10.6	1430.4	3.47	6.0	8.10	69.8	1306.2	4.92	6.2	13.02	303.0	1073.6	3.43	5.6
17	2.61	7.8	702.4	4.73	12.3	2.63	20.2	668.7	10.59	12.5	4.49	115.8	558.9	5.71	11.8
18	2.27	4.9	649.5	2.45	13.4	2.30	13.2	696.8	8.06	12.2	4.18	67.2	591.2	4.26	12.5
19	2.19	7.7	631.2	3.98	13.7	2.35	21.3	589.8	7.85	14.1	4.12	102.1	517.2	5.11	12.8
20	2.66	15.7	793.2	2.52	10.7	2.95	16.8	857.5	9.88	9.9	5.42	111.0	665.9	3.62	10.3
21	3.35	95.0	503.1	3.59	13.4	2.44	21.5	783.1	13.28	10.8	4.82	136.2	425.2	5.19	13.6
22	3.40	45.3	700.8	2.67	11.3	2.58	12.2	779.5	11.81	11.0	5.12	100.2	657.0	5.07	10.7
23	4.86	21.9	950.5	3.17	8.9	5.08	40.9	957.8	11.74	8.5	7.07	149.4	743.8	4.47	8.9
24	2.32	9.2	605.1	4.95	14.2	2.08	13.4	666.4	12.29	12.8	4.46	102.2	540.3	5.60	12.4
25	2.14	6.9	563.5	3.17	15.3	1.71	7.0	579.3	8.95	14.9	3.75	66.1	524.8	5.26	13.9
26	5.40	13.0	883.9	4.09	9.6	5.11	34.4	851.2	6.32	9.6	8.43	173.1	701.5	3.41	8.9
27	2.50	9.7	722.7	5.94	11.9	2.45	24.5	755.8	14.71	11.1	4.68	98.4	620.8	6.63	11.2
28	2.43	5.6	619.1	2.88	14.0	2.14	10.1	665.3	8.69	12.9	4.72	76.7	540.5	5.25	13.1
29	3.83	7.7	905.5	3.17	9.5	4.41	46.3	829.7	8.47	9.7	6.88	149.2	673.2	3.19	9.5
30	2.44	15.5	623.9	5.29	13.5	2.09	19.7	660.4	12.52	12.7	4.03	79.2	519.2	5.14	13.5
31	2.06	15.8	594.7	3.12	14.2	1.81	9.2	694.3	11.18	12.4	3.92	88.4	571.0	5.11	12.3
32	5.07	27.5	875.8	3.49	9.5	5.12	33.3	925.2	7.82	8.9	8.99	167.4	739.3	3.57	8.6
SUM	2.22	12.6	613.6	3.16	13.9	2.08	13.4	638.3	8.83	13.3	3.85	67.1	550.9	6.35	13.3
HAG	2.36	21.4	679.1	3.67	12.3	2.21	16.6	752.2	9.73	11.3	4.21	90.7	615.2	5.25	11.5
33	0.50	0.8	134.3	0.00	64.8	1.29	11.8	109.1	0.23	67.4	0.99	40.2	94.6	0.00	55.1
34	4.98	9.5	1654.2	0.00	5.3	7.94	83.4	1737.7	6.74	4.7	8.75	357.0	1223.7	0.11	4.9
35	1.49	7.1	1084.6	0.00	8.1	4.54	48.6	686.2	0.64	11.4	4.11	156.5	806.7	0.19	8.3
36	0.96	3.8	705.6	0.35	12.4	2.19	17.4	630.6	1.16	13.3	2.30	79.2	566.3	0.13	12.7
37	1.24	2.8	469.7	1.39	18.6	1.34	6.7	426.7	1.15	20.1	2.36	14.8	407.5	1.06	20.3
38	1.26	3.2	471.5	1.73	18.5	1.14	4.4	467.8	5.20	18.6	2.35	10.8	436.5	7.83	19.3
39	1.06	5.2	524.4	2.75	16.6	0.89	4.3	493.7	8.96	17.6	2.90	24.5	493.5	11.10	16.4

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX D,CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

HOUSTON

	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID
	040	1973	PLYM	FURY	360	041	1973	PONT	VENT	350	042	1973	PONT	BONN	400
MODE NO.	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG
1	11.13	183.5	705.0	4.32	8.6	11.34	123.8	704.0	3.90	9.5	6.21	138.7	706.7	6.73	9.4
2	8.39	197.3	682.5	2.11	8.7	8.02	65.8	708.7	1.86	10.6	7.82	108.5	786.0	3.22	9.1
3	13.31	355.6	928.0	1.58	5.8	16.63	193.1	1031.9	1.84	6.4	12.89	294.3	1076.8	3.04	5.6
4	5.60	171.8	621.4	2.70	9.8	5.61	57.6	721.0	2.20	10.7	5.44	68.2	740.2	3.68	10.3
5	3.71	86.7	579.0	5.42	12.2	2.11	18.4	576.7	11.00	14.5	3.21	22.4	647.8	5.80	12.8
6	4.12	111.0	444.9	2.16	14.0	2.29	13.2	437.3	5.69	19.1	5.42	40.9	552.5	2.89	14.0
7	5.32	116.1	595.6	4.87	11.2	4.20	31.4	592.8	11.78	13.5	4.23	148.9	649.4	6.76	9.9
8	4.08	83.0	565.6	3.58	12.5	3.72	35.9	494.3	7.24	15.8	4.28	47.2	599.1	5.16	12.9
9	4.67	117.4	558.3	4.03	11.7	4.48	26.0	546.2	14.09	14.8	2.88	38.0	648.9	8.38	12.4
10	4.73	90.6	509.9	2.91	13.3	4.11	21.1	501.8	7.59	16.2	4.97	38.0	617.1	5.07	12.8
11	5.38	182.8	657.4	5.16	9.2	5.37	56.7	579.9	14.31	12.9	3.87	70.6	739.4	10.47	10.3
12	6.10	105.3	683.0	4.19	10.2	5.10	28.8	623.5	10.07	13.0	5.78	51.1	765.2	7.48	10.3
13	6.75	212.1	676.7	4.00	8.6	5.50	57.4	673.8	7.50	11.4	4.63	81.6	829.4	11.95	9.1
14	4.91	89.5	519.6	3.22	13.1	3.21	22.8	481.2	4.68	16.8	4.09	35.5	575.7	5.04	13.8
15	7.91	138.9	501.0	1.52	11.9	9.30	49.5	474.2	3.62	15.3	5.53	100.1	556.0	2.95	12.1
16	15.47	406.9	1057.2	1.97	5.1	24.40	212.7	900.1	4.53	6.8	21.69	347.8	1053.7	2.86	5.3
17	5.48	186.7	608.8	4.20	9.7	6.51	78.0	629.8	4.57	11.5	4.48	101.6	695.3	6.87	10.2
18	5.17	160.2	498.7	2.06	11.6	4.02	31.4	550.1	1.98	14.5	4.52	55.5	248.0	3.41	25.4
19	6.14	191.5	530.4	2.48	10.4	6.27	56.2	552.1	10.94	13.4	4.25	69.5	677.4	6.16	11.1
20	7.88	219.8	582.6	1.80	9.3	6.09	34.5	565.1	7.59	13.9	8.02	81.3	693.6	3.86	10.5
21	6.58	258.7	607.8	3.87	8.6	5.52	99.1	605.3	5.39	11.4	4.79	214.1	744.5	6.84	8.1
22	6.61	141.8	626.9	3.44	10.2	4.65	48.3	580.4	3.36	13.2	5.09	72.0	662.2	5.22	11.2
23	11.16	241.6	777.9	4.82	7.4	11.53	122.2	770.0	4.04	8.9	8.40	124.9	845.2	6.40	8.3
24	4.45	136.0	596.8	4.73	10.8	3.16	27.3	581.9	10.05	14.0	3.49	56.0	651.1	7.55	11.8
25	3.64	85.5	505.7	2.36	13.6	3.26	18.0	487.0	6.82	16.9	3.76	35.5	575.5	5.87	13.8
26	13.02	252.8	697.9	2.07	7.8	12.93	72.3	704.4	6.61	10.3	9.35	140.3	763.0	4.53	8.8
27	5.50	185.6	692.8	4.99	8.9	4.59	51.7	614.3	5.89	12.5	3.82	43.9	781.3	10.54	10.3
28	6.19	108.1	501.4	2.67	12.8	4.47	30.4	505.2	4.80	15.6	4.54	48.3	611.2	5.28	12.7
29	11.24	233.8	750.7	3.81	7.7	10.22	116.0	727.0	3.80	9.4	7.93	112.1	794.6	5.21	8.9
30	4.67	157.5	573.7	4.26	10.6	2.96	24.2	586.4	11.53	14.0	3.59	73.6	640.2	8.05	11.6
31	4.03	109.4	551.2	2.55	12.1	3.36	19.5	518.7	7.24	15.8	3.57	41.3	624.1	5.43	12.7
32	13.55	224.8	700.9	2.08	8.1	12.12	62.3	656.4	14.46	11.2	5.06	142.1	768.1	4.16	8.8
SUM	4.93	129.6	566.4	3.88	11.3	4.79	38.5	516.2	6.65	15.0	3.77	62.2	632.9	5.77	12.0
BAG	5.46	163.9	640.1	3.51	9.7	4.43	44.7	537.2	6.42	14.3	4.43	71.7	729.9	6.52	10.4
33	1.91	54.1	80.7	0.05	51.7	2.75	33.7	125.0	0.86	47.5	1.28	44.2	94.2	0.08	52.9
34	11.95	611.2	1138.8	0.64	4.2	21.89	417.0	738.2	0.33	6.1	16.96	590.3	1338.3	2.91	5.8
35	5.47	298.5	716.3	0.38	7.4	11.62	114.9	778.4	2.00	8.9	7.60	292.8	568.4	0.16	8.4
36	3.61	193.6	558.9	0.37	10.1	10.51	83.1	395.6	0.36	15.9	4.63	176.9	536.2	0.32	10.7
37	3.36	95.3	401.8	2.14	15.8	4.89	14.6	358.1	1.94	22.4	2.81	50.2	425.7	1.65	17.3
38	4.17	142.4	404.6	2.19	13.8	2.76	18.6	334.4	3.57	23.8	1.67	14.8	519.5	2.32	16.2
39	2.20	31.2	564.6	6.41	14.3	2.21	9.9	410.5	7.63	20.5	1.44	7.5	606.3	6.92	14.3

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

```
                                  APPENDIX D,CONT'D

                  LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

                                      HOUSTON

        VEH  YEAR  MAKE  MODL  CID        VEH  YEAR  MAKE  MODL  CID        VEH  YEAR  MAKE  MODL  CID
        ---  ----  ----  ----  ---        ---  ----  ----  ----  ---        ---  ----  ----  ----  ---
        043  1973  TOYO  CORO  120        044  1973  VOLK  SEDA   97        045  1973  VOLK  STAW  103

MODE
NO.     HC    CO    CO2   NOX   MPG       HC    CO    CO2   NOX   MPG       HC    CO    CO2   NOX   MPG
-----------------------------------------------------------------------------------------------------------
 1     4.63  46.6  371.2  5.04 19.3      7.24  86.8  507.1  7.01 13.3      5.71  61.3  607.1  0.97 12.3
 2     4.37  22.5  478.0  5.77 16.8      7.73  84.0  371.7  2.72 16.8      4.08  65.8  660.9  1.50 11.4
 3     7.70  36.4  571.2  3.54 13.6     12.84 133.5  502.8  2.73 11.8      7.33 100.4  916.8  1.36  8.1

 4     2.99  27.3  390.6  3.58 20.0      5.98  54.4  393.8  5.04 17.8      3.10  52.2  576.9  2.00 13.3
 5     1.87  12.6  333.6  7.03 24.7      3.74  43.0  368.3  6.34 19.8      2.06  30.4  475.4  3.33 16.8
 6     1.62   8.7  283.4  4.76 29.4      3.07  43.9  335.1  3.71 21.5      1.81  27.1  364.8  1.83 21.5

 7     1.62  25.0  333.5  4.36 23.5      2.97  35.1  364.9  7.26 20.7      2.04  41.7  422.6  3.50 17.9
 8     2.70 110.7  270.5  3.13 19.6      2.88  60.1  332.7  3.54 20.3      1.66  50.0  398.8  3.04 18.4
 9     2.04  40.3  323.3  5.25 22.6      3.24  68.9  395.0  7.76 17.3      1.96  40.6  374.3  2.92 20.0

10     2.26  40.7  362.3  7.19 20.5      3.05  40.0  344.3  4.61 21.3      1.73  34.8  403.5  2.37 19.1
11     2.40  66.7  294.7  2.48 21.8      3.75  43.6  376.5  6.52 19.4      2.78  69.2  413.7  2.79 16.7
12     3.50  93.9  438.7  7.46 14.9      4.58  61.1  410.2  4.60 17.0      2.45  65.2  502.9  2.78 14.5

13     3.97  88.7  418.5  6.10 15.6      5.77  84.3  384.9  6.19 16.6      3.33  81.0  467.6  3.85 14.7
14     3.40  47.4  347.6  6.07 20.5      3.18  45.0  326.5  3.89 21.8      1.77  44.8  382.1  2.11 19.4
15     5.01  40.4  361.1  3.79 20.2      6.19  41.1  329.1  3.16 21.5      2.45  42.9  485.4  1.00 15.8

16    10.30 103.4  781.5  3.72  9.1     18.28 195.1  656.9  4.23  8.7      6.60 105.8 1162.4  1.61  6.6
17     3.51  45.8  365.4  7.61 19.8      6.25  80.3  360.2  6.26 17.5      2.97  48.6  429.2  3.35 17.2
18     2.67  17.5  443.4  6.50 18.5      4.19  43.2  421.8  5.66 17.6      3.21  64.4  472.3  2.15 15.2

19     2.70  24.5  381.1  6.09 20.7      3.97  50.3  358.7  6.57 19.7      2.83  39.7  326.4  2.36 22.3
20     2.87  27.7  505.3  5.98 15.9      5.44  56.3  488.0  6.42 14.9      4.07  92.3  541.0  2.12 12.7
21     3.06  52.4  330.7  5.68 21.0      4.22  69.6  342.6  5.31 19.1      3.11  73.8  393.1  2.65 17.1

22     4.18  80.5  393.8  4.00 16.6      4.22  63.2  387.8  3.86 17.7      3.02  84.0  512.8  2.61 13.6
23     4.53  56.6  450.6  5.96 16.0      7.65  86.4  432.9  6.06 15.0      4.69  64.2  619.9  3.17 12.1
24     2.28  33.3  370.9  7.90 20.6      3.39  43.7  337.2  6.05 21.3      1.95  38.0  427.6  3.53 18.0

25     1.90  25.2  349.1  7.05 22.5      2.67  47.8  312.9  3.14 22.4      1.77  38.9  403.3  2.56 18.9
26     3.96  39.9  525.4  6.34 14.8      6.94  88.3  452.7  4.19 14.5      3.87  58.0  692.9  1.62 11.1
27     2.81  51.6  401.2  8.55 18.1      4.78  94.7  436.9  6.54 14.8      3.11  69.0  473.0  3.44 15.0

28     2.37  22.7  374.3  7.81 21.3      3.26  42.8  333.6  4.07 21.6      2.09  44.2  413.1  1.89 18.1
29     3.49  34.5  429.7  6.77 17.9      6.59  85.2  396.5  6.74 16.1      3.94  50.7  600.1  2.73 12.8
30     1.79  20.2  330.3  7.24 24.1      2.83  36.5  347.9  6.33 21.4      2.00  37.9  427.6  3.56 18.0

31     2.20  44.5  383.0  5.43 19.3      2.73  68.9  322.2  2.74 20.2      1.87  66.7  423.1  2.47 16.6
32     3.93  45.1  527.6  5.42 14.5     12.91 141.6  405.3  2.76 13.3      4.36  73.4  706.0  1.65 10.6


SUM   2.07  30.8  364.9  6.39 21.1      2.97  38.2  360.4  5.59 20.7      2.14  47.3  425.5  2.34 17.5
HAG   2.75  54.5  386.2  5.75 18.5      4.20  66.4  396.2  5.62 17.3      2.22  59.5  447.6  2.50 16.2


33     0.55   5.7   39.9  0.00  175      0.57   3.7   60.5  0.09  130      1.70  29.2  146.7  0.59 44.8
34     2.97  36.8  728.9  0.05 11.1      5.52  98.0  745.6  1.85  9.7      2.50 189.4 1287.1  0.70  5.6
35     1.59  26.2  439.9  0.22 18.3      1.97  23.9  589.0  1.13 14.0      4.08 102.3  953.2  1.16  7.9
36     1.81  48.2  385.1  0.27 19.0      1.34  19.1  383.6  1.24 21.2      0.49  47.6  562.9  0.41 13.9

37     0.75   6.7  334.5  1.63 25.6      0.93   5.5  321.0  3.26 26.7      0.92  37.3  367.2  0.55 20.7
38     0.23   3.1  298.1  2.94 29.2      0.88   4.9  301.3  5.56 28.5      1.04  22.9  291.5  1.26 26.8
39     0.85   2.7  347.9 11.58 25.0      0.90   5.3  322.3  8.07 26.6      0.75  16.7  305.5  2.27 26.6


EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 111.85 CARBON TO HYDROGEN RATIO
```

APPENDIX D,CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

HOUSTON

	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID
	046	1972	BUIC	LESA	350	047	1972	BUIC	FLEC	455	048	1972	CHEV	VEGA	140
MODE NO.	HC	CO	CO2	NOX	MPG	HC	CO	CU2	NOX	MPG	HC	CO	CU2	NOX	MPG
1	5.56	69.8	922.5	7.53	8.5	4.53	33.3	924.7	10.72	9.0	4.73	53.7	481.6	2.06	15.3
2	5.81	75.0	656.9	4.68	11.2	3.45	21.3	952.0	7.37	8.9	4.25	39.2	794.1	2.11	10.2
3	12.95	137.2	1352.5	5.19	5.5	5.61	49.9	1298.8	7.48	6.4	6.45	45.0	792.5	2.06	10.0
4	4.96	55.1	727.2	6.07	10.7	2.30	15.7	780.9	9.66	10.9	2.78	17.3	497.2	2.02	16.6
5	3.48	27.4	570.6	8.86	14.2	2.17	7.9	620.1	17.50	13.9	2.34	26.0	389.2	5.11	20.3
6	3.03	16.1	512.4	4.85	16.2	1.75	6.1	639.8	9.47	13.6	1.97	15.5	417.0	4.00	19.8
7	4.22	82.7	587.3	6.67	12.1	3.10	17.6	605.7	16.66	13.8	3.04	54.1	391.2	4.58	18.3
8	3.25	66.4	538.7	4.85	13.6	1.74	33.2	746.7	12.07	11.0	2.21	39.4	366.0	3.31	20.4
9	3.20	43.6	542.5	7.59	14.3	1.75	10.7	585.3	16.05	14.6	1.62	27.4	352.3	4.78	22.2
10	3.29	41.2	555.5	4.82	14.1	1.87	8.7	697.1	13.81	12.4	1.53	14.8	387.6	3.71	21.3
11	3.79	90.7	687.6	6.78	10.5	1.93	13.7	744.0	16.40	11.5	2.97	58.8	433.0	3.40	16.6
12	3.83	51.6	719.5	5.86	10.9	2.40	11.1	957.4	12.31	9.0	2.21	28.4	494.3	3.82	16.3
13	3.76	65.7	797.2	8.92	9.7	2.03	15.1	883.0	21.14	9.7	3.60	67.7	480.8	3.88	14.8
14	2.63	34.5	533.5	4.31	14.9	1.79	9.1	668.7	13.86	12.9	1.62	21.9	376.2	2.98	21.3
15	4.26	44.9	616.3	3.28	12.7	2.88	11.2	693.0	8.27	12.3	2.51	15.6	370.9	2.05	22.0
16	11.10	134.8	1471.0	4.17	5.2	5.81	40.5	1595.6	7.76	5.3	14.61	32.7	751.8	3.45	10.4
17	3.86	64.6	649.6	7.17	11.6	1.90	21.9	759.7	12.80	11.1	3.88	66.5	451.9	2.37	15.6
18	3.35	34.1	628.3	4.31	12.8	2.19	11.1	760.3	13.76	11.3	2.10	23.2	468.0	2.74	17.4
19	3.46	41.6	584.2	6.79	13.4	1.49	10.2	694.7	9.67	12.4	2.92	49.1	392.8	3.15	18.5
20	4.17	40.6	774.1	5.50	10.4	2.71	16.1	966.4	17.53	8.9	2.36	29.4	548.5	2.80	14.7
21	4.86	173.2	703.8	5.56	9.0	2.76	60.2	768.5	11.33	10.2	5.02	104.2	411.9	2.06	15.0
22	3.82	69.2	681.8	5.33	11.1	2.76	39.2	865.2	13.65	9.5	3.00	48.4	434.0	2.05	17.1
23	5.78	82.3	972.1	7.57	7.9	3.67	33.1	1028.9	13.36	8.1	5.26	62.3	570.3	2.51	13.0
24	2.89	40.3	599.1	7.94	13.2	2.00	9.5	665.2	17.55	12.9	2.08	43.3	407.3	3.28	18.4
25	2.57	28.5	501.2	4.85	16.0	1.76	7.6	687.1	14.02	12.6	1.24	20.3	370.5	2.12	21.8
26	6.56	69.2	832.4	4.23	9.2	3.97	13.6	1007.8	11.98	8.5	3.10	30.6	605.7	2.01	13.4
27	3.22	51.1	746.7	8.97	10.6	1.96	13.0	825.1	19.60	10.4	2.84	66.1	466.3	1.58	15.3
28	3.30	35.2	582.8	5.30	13.7	2.37	8.7	718.6	13.40	12.0	1.70	23.4	394.3	1.71	20.3
29	5.37	73.9	933.5	6.21	8.3	3.41	25.3	992.9	13.28	8.5	2.80	36.9	533.9	1.75	14.8
30	3.32	81.6	600.7	5.75	12.0	2.10	10.4	720.0	17.17	11.9	1.71	46.2	412.5	2.85	18.1
31	2.93	48.9	530.5	4.60	14.4	1.98	9.5	723.9	13.71	11.9	1.08	26.9	396.1	1.46	20.1
32	6.07	79.8	815.0	6.84	9.2	3.97	17.3	964.6	9.97	8.8	2.31	23.7	595.0	1.58	13.9
SUM	3.08	52.1	594.6	5.31	12.9	1.94	12.7	703.7	13.43	12.2	1.70	29.4	410.9	3.54	19.2
HAG	2.83	59.8	689.5	5.99	11.2	2.03	18.7	804.6	13.08	10.6	1.85	43.7	461.8	3.17	16.5
33	0.94	22.8	242.6	1.41	31.5	0.50	5.5	131.1	0.16	62.8	0.58	3.8	53.2	0.03	145
34	6.62	206.4	1894.2	2.79	4.0	4.46	52.5	1645.6	1.60	5.1	3.00	31.3	1074.6	0.55	7.8
35	3.98	79.7	1118.1	3.61	7.1	1.91	16.6	1020.8	0.80	8.4	1.24	7.6	550.8	0.52	15.7
36	1.99	67.5	619.2	0.58	12.1	1.04	6.8	763.5	0.79	11.4	0.16	4.7	548.3	0.88	16.0
37	1.74	33.8	357.7	1.02	21.3	1.57	3.3	486.0	4.33	17.9	0.33	6.4	327.4	2.86	26.2
38	1.73	24.2	391.2	2.94	20.4	1.33	4.2	537.6	10.82	16.2	0.34	10.8	306.2	4.47	27.4
39	1.91	30.8	446.2	5.19	17.7	1.14	5.3	594.7	16.79	14.6	0.10	10.9	367.8	5.69	23.0

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX D,CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

HOUSTON

	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID
	049	1972	CHEV	VEGA	140	050	1972	CHEV	NOVA	307	051	1972	CHEV	MONT	350
MODE NO.	**HC**	**CO**	**CO2**	**NOX**	**MPG**	**HC**	**CO**	**CO2**	**NOX**	**MPG**	**HC**	**CO**	**CO2**	**NOX**	**MPG**
1	2.21	56.0	470.5	8.76	15.7	3.50	62.4	724.8	1.35	10.6	3.89	65.2	748.8	5.45	10.3
2	1.13	61.8	626.7	9.56	12.2	4.30	29.0	720.2	2.22	11.4	2.60	24.2	649.6	2.85	12.8
3	0.64	106.6	756.0	17.73	9.6	4.30	49.5	961.0	1.67	8.4	5.61	73.9	985.0	3.41	7.9
4	1.42	32.1	502.8	7.31	15.9	1.65	14.3	675.8	1.64	12.6	2.35	29.8	630.8	4.49	13.0
5	3.07	31.9	464.4	5.27	16.9	1.02	14.1	595.3	2.64	14.3	1.54	13.1	542.2	8.26	15.6
6	2.19	36.9	307.9	5.05	23.8	1.60	8.4	450.8	3.75	18.9	1.60	10.1	439.4	5.04	19.3
7	3.65	27.1	320.8	4.17	23.7	2.05	74.7	516.8	2.81	13.9	2.35	28.7	560.4	11.71	14.5
8	2.65	56.3	311.2	3.63	21.8	2.72	47.7	504.1	3.93	15.1	1.94	27.0	492.1	6.41	16.4
9	2.88	24.3	309.4	5.65	24.9	2.75	51.8	501.9	3.97	15.0	2.25	17.9	534.5	12.17	15.6
10	3.40	32.1	316.1	3.74	23.5	2.14	25.8	504.0	4.17	16.1	2.15	14.0	491.5	6.93	17.1
11	4.09	50.3	371.6	4.59	19.1	2.82	92.3	576.5	2.62	12.1	2.51	31.1	622.6	11.85	13.1
12	3.78	57.8	390.8	3.95	18.0	2.62	42.2	709.2	4.33	11.3	2.39	14.1	650.3	9.02	13.1
13	3.45	62.3	383.5	5.40	18.0	3.21	90.2	670.4	3.35	10.8	2.89	22.9	672.5	13.73	12.4
14	2.71	36.7	295.3	3.51	24.5	2.17	33.5	535.1	3.60	14.9	1.83	12.7	483.1	6.68	17.4
15	4.54	32.8	290.7	2.04	24.9	4.19	19.7	482.3	2.76	16.9	3.55	32.1	489.2	3.98	16.1
16	11.50	71.7	735.3	2.51	10.0	7.25	52.9	1028.8	2.82	7.8	7.68	96.6	1039.8	4.23	7.3
17	4.53	45.4	368.7	3.71	19.5	2.21	49.3	538.9	3.57	14.2	2.47	35.6	546.0	8.94	14.6
18	4.30	57.8	471.0	2.43	15.4	1.74	22.2	673.7	3.02	12.4	1.85	18.4	581.4	3.74	14.4
19	3.81	27.6	368.8	3.36	20.9	1.78	34.7	520.9	3.23	15.3	2.20	31.3	512.3	7.74	15.6
20	4.86	66.4	541.8	1.91	13.4	1.61	15.9	775.6	2.32	11.0	2.67	22.6	681.3	4.44	12.2
21	5.08	38.0	365.1	3.63	20.1	2.95	157.1	561.3	2.01	10.9	2.55	37.2	621.2	12.41	12.9
22	3.70	51.4	349.1	4.13	20.1	2.99	63.9	672.5	3.42	11.3	2.36	23.0	588.3	5.82	14.0
23	6.44	62.5	480.4	3.78	14.8	4.49	63.2	746.7	3.16	10.3	4.36	61.1	771.0	7.44	10.1
24	2.87	32.4	367.9	3.71	20.7	1.68	59.8	553.7	2.89	13.6	1.65	13.0	543.6	11.13	15.6
25	2.30	31.8	305.0	3.31	24.5	2.38	42.0	510.6	4.30	15.2	1.67	10.1	464.3	7.38	18.3
26	5.49	46.4	424.5	2.89	17.2	6.44	40.6	680.0	4.20	11.6	5.65	65.9	667.2	5.50	11.3
27	4.28	64.6	379.4	4.30	18.0	2.53	76.7	596.2	3.97	12.2	2.23	27.5	625.1	10.52	13.1
28	3.00	31.0	327.9	3.70	23.0	2.37	26.0	564.5	4.86	14.5	2.67	20.8	490.0	6.43	16.7
29	5.30	52.8	449.2	3.19	16.2	3.76	53.5	710.2	3.44	11.0	4.28	66.4	705.7	6.08	10.8
30	2.75	45.7	295.4	3.30	23.6	2.20	131.9	540.4	2.13	11.8	1.81	19.4	555.1	9.99	15.0
31	2.31	45.5	311.5	3.09	22.7	3.02	61.0	522.3	4.78	14.1	1.82	21.6	527.7	8.77	15.6
32	5.09	50.8	407.4	2.32	17.6	6.22	52.6	674.5	3.71	11.4	4.75	63.6	694.5	6.38	11.0
SUM	2.46	31.7	357.2	4.23	21.4	2.19	37.8	555.9	3.55	14.3	1.92	18.3	526.4	7.63	15.8
RAG	3.06	54.9	379.3	3.83	18.7	2.98	64.9	601.7	3.40	12.4	2.19	24.5	588.9	8.26	14.0
33	0.30	4.1	59.8	0.03	131	0.63	3.6	100.0	0.06	82.5	0.57	9.6	137.2	0.38	57.6
34	4.00	145.8	583.4	0.33	10.8	4.85	37.3	989.9	0.55	8.3	5.11	64.8	1148.2	0.11	7.0
35	1.30	36.4	666.5	0.54	12.2	1.58	9.8	959.1	0.88	9.1	3.18	40.7	667.3	1.48	12.0
36	0.48	22.1	426.0	0.36	19.2	1.25	8.3	636.9	0.73	13.6	1.65	23.9	527.2	0.24	15.6
37	0.24	7.2	409.9	1.02	21.0	1.62	3.8	390.8	1.78	22.1	1.14	5.7	352.6	2.12	24.3
38	0.91	9.7	245.6	3.46	33.7	1.66	4.1	421.5	4.39	20.5	1.02	5.4	354.9	4.97	24.2
39	1.18	14.0	293.8	6.75	27.8	1.24	8.2	521.4	4.84	16.5	0.96	3.4	442.2	9.13	19.7

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX D,CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

HOUSTON

	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID
	052	1972	CHEV	NOVA	350	053	1972	CHEV	STAW	350	054	1972	CHEV	IMPA	400
MODE NO.	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG
1	7.22	89.0	687.1	6.10	10.4	4.48	89.3	872.4	10.57	8.6	6.84	39.2	866.2	4.47	9.3
2	5.57	66.7	746.6	3.46	10.2	3.45	47.3	707.8	4.13	11.2	4.97	131.9	727.1	3.39	9.3
3	10.27	213.7	1029.2	2.85	6.4	6.06	169.5	1046.9	4.85	6.7	10.42	174.4	1048.9	3.17	6.5
4	3.99	77.6	705.5	4.24	10.6	2.48	32.9	768.8	6.02	10.7	3.83	67.5	701.0	3.56	10.8
5	2.37	30.3	654.7	7.88	12.5	1.82	12.8	715.0	9.50	12.0	2.35	24.5	622.2	5.13	13.3
6	2.72	24.5	494.3	6.04	16.4	1.73	16.1	522.2	5.87	16.1	2.41	32.9	496.4	2.93	16.0
7	3.06	78.8	612.8	7.96	11.9	2.44	118.1	652.3	9.96	10.5	2.94	29.4	676.5	5.70	12.1
8	2.47	37.7	541.6	8.12	14.6	2.33	31.7	602.2	8.37	13.5	2.52	64.1	557.8	5.08	13.3
9	2.79	23.0	595.3	12.94	13.9	2.39	54.9	655.4	11.62	11.8	2.38	34.7	626.5	2.80	12.9
10	3.06	21.5	561.5	8.54	14.7	2.22	23.5	614.9	8.63	13.5	2.51	55.2	605.7	6.32	12.7
11	3.04	60.5	658.4	10.13	11.6	3.04	91.6	724.1	10.24	10.1	3.14	54.6	665.8	5.73	11.7
12	3.34	35.4	730.3	8.74	11.1	2.45	28.9	817.0	9.38	10.2	4.20	94.0	716.9	6.53	10.1
13	3.78	84.0	729.3	10.33	10.2	3.42	94.6	770.5	11.48	9.5	4.29	78.4	762.8	9.67	9.9
14	2.78	40.4	510.7	6.11	15.2	1.80	22.3	587.3	7.26	14.1	3.33	65.8	518.4	4.36	14.0
15	5.40	82.1	488.2	3.11	14.0	3.92	61.9	564.7	4.10	13.2	6.26	96.3	543.4	2.47	12.4
16	13.13	299.6	1075.4	4.37	5.6	9.00	185.4	1143.2	4.56	6.1	13.65	289.3	990.7	3.21	6.0
17	3.53	93.2	565.5	6.55	12.3	2.64	49.1	657.0	9.93	11.9	4.19	93.6	579.0	7.13	12.0
18	2.86	38.8	653.3	4.47	12.3	1.78	27.0	703.8	5.76	11.8	4.33	65.5	566.6	4.19	13.0
19	3.60	87.8	503.6	5.53	13.6	2.36	33.8	614.8	8.54	13.1	5.90	79.7	522.5	6.00	13.3
20	3.57	64.3	742.3	4.46	10.4	2.35	39.2	812.9	6.12	10.1	4.21	70.0	766.1	4.68	10.0
21	4.03	199.6	604.0	4.26	9.5	3.28	155.9	700.2	7.84	9.3	3.56	67.2	716.7	9.92	10.6
22	4.47	100.1	605.5	4.41	11.4	2.76	44.7	685.3	7.24	11.6	4.80	119.2	660.3	5.54	10.3
23	7.31	170.3	767.1	7.16	8.4	4.73	81.6	879.7	8.67	8.7	6.96	158.0	854.7	6.42	7.9
24	2.52	44.2	592.0	11.23	13.3	2.08	45.1	669.7	9.64	11.9	2.89	46.6	605.9	6.69	12.9
25	2.83	28.0	525.8	7.35	15.3	1.81	20.1	572.3	8.53	14.6	3.39	73.4	428.8	4.50	16.0
26	8.18	109.4	726.3	5.99	9.6	5.42	84.1	775.7	6.85	9.6	9.39	148.4	619.0	3.39	10.1
27	3.39	74.2	662.3	9.98	11.2	2.53	46.2	717.3	11.37	11.1	4.06	73.6	679.4	7.79	11.0
28	4.12	53.7	529.2	5.87	14.2	2.18	26.9	607.8	7.89	13.5	5.47	91.4	535.1	3.63	12.8
29	6.41	164.2	737.2	6.68	8.7	3.89	75.9	822.3	8.07	9.3	7.31	157.7	743.3	5.47	8.8
30	2.91	62.2	603.8	9.62	12.5	2.10	58.3	665.4	9.72	11.6	3.26	55.7	595.9	6.29	12.8
31	2.81	39.3	573.1	7.82	13.8	1.93	27.2	645.2	8.64	12.8	3.09	87.1	570.5	4.58	12.4
32	8.01	129.3	682.8	5.03	9.7	4.99	78.3	815.2	6.05	9.4	7.38	162.2	741.8	3.30	8.7
SUM	4.19	62.1	622.5	10.12	12.1	2.09	37.4	650.0	8.80	12.4	3.13	61.7	587.4	4.61	12.8
BAG	3.00	73.8	664.0	7.98	11.2	2.76	50.9	736.3	8.73	10.8	3.80	75.6	646.2	5.77	11.4
33	3.66	65.2	393.7	17.15	17.5	0.70	21.4	102.9	0.05	63.9	1.48	36.0	222.4	1.57	31.3
34	12.78	473.0	1138.1	1.24	4.6	7.83	238.9	1152.3	0.63	5.7	9.51	280.1	955.4	0.72	6.2
35	58.71	210.9	752.1	0.72	7.0	4.00	110.2	614.1	0.31	11.1	6.49	178.4	1024.3	4.32	6.7
36	8.85	90.8	579.7	0.69	11.8	1.92	26.3	640.7	0.70	12.9	3.33	108.7	421.0	0.20	14.7
37	2.01	49.3	389.5	1.17	18.7	1.25	3.7	484.5	4.17	18.0	1.57	29.6	429.2	1.11	18.5
38	1.61	22.6	453.7	10.94	18.0	1.05	3.1	523.4	7.86	16.7	0.61	12.9	403.3	1.46	20.9
39	4.62	12.7	529.4	9.39	15.7	0.99	4.8	610.1	12.35	14.3	1.40	29.2	462.6	3.55	17.3

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

HOUSTON

	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID
	055	1972	DATS	STAW	97	056	1972	DODG	DART	318	057	1972	DODG	POLA	360
MODE NO.	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG
1	4.50	20.6	374.2	9.51	20.6	4.06	39.9	407.5	3.23	18.4	21.85	192.1	760.2	8.27	7.8
2	4.70	29.4	560.2	4.12	14.3	5.00	88.5	449.9	3.69	14.8	17.11	123.8	718.0	6.71	9.2
3	7.91	23.2	453.6	23.59	17.2	8.63	84.8	774.6	2.65	9.5	30.55	233.1	1034.8	5.56	5.9
4	3.79	24.8	268.8	5.68	27.7	3.42	50.1	490.7	4.88	15.3	13.90	109.0	605.0	7.11	10.8
5	3.09	5.9	361.1	7.27	23.4	2.90	31.5	460.2	7.69	17.1	10.17	63.2	519.2	8.65	13.6
6	2.47	2.9	278.7	4.90	30.5	2.42	25.4	414.5	4.71	19.2	9.99	68.6	464.3	6.12	14.7
7	2.87	19.2	352.2	7.34	22.7	2.91	26.7	376.6	7.57	20.7	9.97	66.7	549.2	9.66	12.9
8	3.19	27.6	312.5	4.91	24.3	2.61	59.2	462.3	5.75	15.7	8.53	81.6	551.1	8.21	12.9
9	2.56	11.6	322.7	9.11	25.4	2.67	32.2	454.8	8.19	17.3	9.43	69.8	519.1	10.23	13.5
10	2.29	8.1	301.0	5.54	27.7	2.42	24.8	480.2	6.19	16.8	12.04	79.8	511.7	7.88	13.1
11	3.18	42.0	386.6	9.95	19.2	2.87	37.5	506.9	8.16	15.4	9.16	80.5	655.5	11.68	10.9
12	3.01	15.0	390.5	7.38	20.9	2.93	37.3	610.6	8.35	13.1	13.16	102.6	671.6	10.34	10.1
13	3.13	34.4	442.7	12.62	17.5	3.28	41.3	562.3	8.19	13.9	12.49	92.4	704.5	12.66	9.9
14	2.18	10.9	297.0	5.80	27.7	2.17	26.3	410.4	6.80	19.4	11.26	82.0	511.2	7.64	13.1
15	4.40	16.8	326.8	3.19	24.2	3.56	44.9	398.6	3.46	18.5	21.77	112.6	499.9	4.69	11.9
16	12.70	53.6	630.0	3.88	11.8	8.97	181.1	449.8	3.48	7.0	48.41	338.0	1019.9	4.58	5.2
17	3.34	26.3	314.3	9.54	24.2	3.07	62.6	407.9	4.96	17.2	11.96	128.3	582.4	8.05	10.8
18	2.30	7.0	406.8	5.75	20.9	2.89	35.4	525.7	5.45	15.0	12.41	111.6	573.5	6.63	11.3
19	3.17	16.9	309.2	9.06	25.7	2.80	53.0	368.0	4.67	19.3	12.62	133.3	500.4	6.59	11.8
20	2.79	8.5	485.9	10.82	17.5	3.53	44.4	603.9	5.82	13.0	16.45	141.4	664.1	7.40	9.5
21	3.01	51.5	376.6	7.73	19.0	3.34	29.7	514.4	5.94	15.5	11.57	225.0	633.8	5.30	8.7
22	3.02	31.0	353.4	6.11	21.6	2.99	72.6	562.8	6.95	12.9	14.62	147.5	610.5	7.43	10.0
23	5.89	32.4	444.1	9.77	17.3	4.53	45.5	620.8	7.95	12.6	23.15	199.0	795.7	9.51	7.5
24	2.05	10.3	372.0	10.52	22.5	2.60	22.4	462.4	7.29	17.5	9.20	94.3	545.5	9.50	12.3
25	1.53	7.5	298.0	6.12	28.2	2.23	42.5	452.0	6.06	16.9	9.86	95.6	487.7	6.47	13.3
26	4.79	18.2	425.0	4.30	18.9	5.60	60.3	602.9	4.89	12.4	29.69	171.9	661.5	5.43	8.7
27	2.53	18.2	390.6	12.74	20.8	3.11	50.2	516.5	6.97	14.7	10.70	118.9	641.2	10.47	10.3
28	1.72	6.2	291.0	5.93	29.0	2.69	55.0	492.2	5.63	15.1	15.06	118.8	502.0	5.64	12.1
29	5.23	28.7	389.3	8.05	19.7	4.32	41.7	577.4	6.58	13.5	24.44	195.8	704.1	8.37	8.1
30	1.95	18.9	374.0	9.23	21.7	2.69	29.7	496.0	7.46	16.1	9.85	102.5	540.6	9.04	12.1
31	1.61	20.7	317.3	5.27	25.0	2.38	53.7	490.3	6.82	15.2	10.12	108.3	538.1	7.05	12.0
32	4.38	20.5	425.1	3.94	18.8	5.50	63.5	594.6	4.70	12.5	30.57	176.3	702.8	6.38	8.2
SUM	1.96	13.2	341.1	6.71	24.1	2.50	32.3	478.6	6.45	16.5	14.58	124.4	632.2	7.54	10.2
HAG	3.19	22.3	379.8	7.70	20.9	2.58	43.7	515.5	6.09	15.0	13.17	128.9	625.2	7.41	10.2
33	0.43	2.9	32.3	0.03	232	0.54	18.3	80.6	0.07	79.9	2.98	25.6	110.6	0.23	55.4
34	6.08	24.1	617.0	0.55	13.2	5.48	187.2	494.6	1.04	6.8	44.93	561.2	1194.9	1.89	4.0
35	1.31	6.2	619.7	0.91	14.0	2.84	92.0	630.8	0.52	11.3	73.96	287.5	705.6	0.82	6.4
36	1.36	6.1	385.6	0.81	22.2	2.02	59.6	504.8	0.42	14.7	46.71	199.3	470.4	0.47	9.5
37	0.49	2.3	311.1	1.60	28.1	1.60	5.2	372.4	2.36	23.0	14.98	75.1	1187.0	2.94	6.6
38	0.70	1.8	265.8	5.63	32.8	1.32	4.6	399.1	5.53	21.6	13.25	296.6	416.8	5.89	9.6
39	0.52	2.4	306.0	6.59	28.5	1.65	11.2	458.2	9.13	18.5	14.18	91.7	504.6	8.71	12.8

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX D,CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

HOUSTON

VEH	YEAR	MAKE	MODL	CID
058	1972	FORD	PINT	122

MODE NO.	HC	CO	CO2	NOX	MPG
1	4.61	42.4	496.9	3.22	15.4
2	4.62	22.7	531.7	2.10	15.3
3	7.44	29.8	698.0	1.95	11.6
4	3.64	15.6	429.5	2.98	19.1
5	2.44	14.9	384.5	3.68	21.4
6	2.00	10.9	351.9	2.27	23.6
7	2.26	35.6	341.6	3.39	21.9
8	1.82	33.6	374.0	3.12	20.5
9	1.75	33.9	344.4	3.89	22.0
10	1.75	16.2	390.1	3.20	21.1
11	2.38	40.1	352.2	3.96	21.0
12	2.51	37.9	481.7	4.13	16.2
13	3.02	62.3	377.7	4.36	18.3
14	1.81	28.9	360.4	3.27	21.6
15	2.75	16.3	418.3	2.16	19.6
16	6.60	21.8	928.9	3.20	9.0
17	2.98	52.5	369.3	3.88	19.2
18	2.29	21.5	378.6	2.83	21.2
19	2.32	27.8	364.2	4.16	21.4
20	2.72	21.2	455.0	3.54	17.9
21	2.46	44.8	323.5	3.68	22.1
22	2.51	41.4	446.4	3.88	17.1
23	4.25	47.0	507.3	3.89	14.9
24	1.88	31.7	350.6	4.78	21.8
25	1.59	21.9	361.3	4.11	22.2
26	3.43	16.8	609.6	3.52	13.7
27	2.66	55.8	370.6	4.67	19.0
28	2.14	22.3	396.9	3.69	20.2
29	3.75	32.7	481.7	3.88	16.3
30	1.91	33.0	344.6	5.03	22.1
31	1.96	33.0	377.7	3.71	20.4
32	4.10	24.7	597.7	3.56	13.7
SUM	1.66	23.0	393.4	3.83	20.4
BAG	1.63	34.3	395.4	3.95	19.5
33	0.51	6.6	109.0	0.66	73.4
34	1.35	9.8	997.8	1.41	8.7
35	1.00	11.0	809.8	1.63	10.7
36	0.18	2.0	449.8	0.54	19.6
37	0.10	1.8	362.2	0.93	24.3
38	0.10	1.5	298.9	2.53	29.4
39	0.65	7.6	365.0	5.72	23.4

VEH	YEAR	MAKE	MODL	CID
059	1972	FORD	TORI	302

MODE NO.	HC	CO	CO2	NOX	MPG
1	7.54	61.3	813.0	7.69	9.5
2	6.58	31.2	808.7	4.54	10.1
3	9.90	55.5	1163.0	3.91	6.9
4	3.77	28.9	641.4	3.87	12.7
5	2.26	10.0	579.1	6.41	14.7
6	2.49	7.7	537.0	4.14	15.9
7	2.26	26.1	573.8	8.07	14.3
8	8.58	41.8	577.1	7.99	13.2
9	5.31	25.1	543.9	8.14	14.8
10	8.56	12.6	570.0	7.49	14.4
11	6.59	75.4	562.0	7.63	12.7
12	10.44	46.9	717.6	9.52	10.8
13	7.35	66.1	649.4	9.45	11.4
14	9.24	39.2	537.8	7.05	14.1
15	12.44	42.5	621.6	3.72	12.2
16	31.13	110.6	1196.4	4.81	6.0
17	7.66	54.0	605.9	7.77	12.4
18	7.63	24.2	591.4	4.90	13.6
19	7.01	43.2	530.0	4.65	14.3
20	8.46	46.0	679.3	4.53	11.4
21	6.66	78.9	611.1	8.78	11.7
22	15.76	58.9	674.3	9.15	10.9
23	13.95	59.4	833.4	7.97	9.1
24	5.82	52.2	564.4	6.45	13.4
25	10.52	30.8	543.5	7.28	14.2
26	19.45	36.5	897.1	5.45	8.7
27	8.58	64.8	626.9	9.74	11.7
28	11.30	26.8	579.3	7.83	13.5
29	13.78	48.1	809.2	6.61	9.6
30	4.97	51.1	588.4	6.56	13.0
31	10.96	39.6	575.5	7.86	13.2
32	19.39	52.5	853.7	5.82	8.9
SUM	5.97	32.2	581.1	7.50	13.6
BAG	9.03	49.2	631.5	6.58	12.0
33	1.09	15.6	94.8	0.10	72.3
34	10.45	242.7	1076.1	1.86	6.0
35	3.94	77.8	759.6	0.52	9.9
36	2.61	50.6	518.2	0.90	14.6
37	1.35	4.4	422.2	1.07	20.5
38	2.04	3.7	475.4	4.69	18.2
39	2.52	6.1	542.8	12.58	15.8

VEH	YEAR	MAKE	MODL	CID
060	1972	FORD	GALA	351

MODE NO.	HC	CO	CO2	NOX	MPG
1	7.67	179.9	687.9	1.71	8.9
2	7.04	152.4	599.7	1.02	10.3
3	10.92	187.5	919.4	1.09	7.1
4	4.89	146.1	545.1	1.06	11.2
5	3.98	126.8	418.3	1.86	14.1
6	2.23	93.1	387.6	1.12	16.4
7	4.53	142.7	458.0	2.76	12.7
8	3.94	133.8	427.2	1.72	13.7
9	4.62	130.6	422.0	3.05	13.8
10	4.45	118.8	435.8	1.89	13.9
11	5.00	154.6	475.2	2.67	12.1
12	5.84	165.4	533.0	2.28	10.9
13	5.70	155.3	565.3	3.48	10.7
14	4.18	119.3	403.6	1.82	14.7
15	6.02	139.2	441.3	0.96	13.1
16	12.47	262.6	885.6	1.24	6.6
17	4.90	125.6	450.5	2.45	13.4
18	4.25	123.5	496.5	1.41	12.6
19	5.02	156.3	410.3	2.07	13.2
20	6.00	154.5	580.6	1.57	10.5
21	5.52	196.8	518.4	2.67	10.5
22	5.29	141.8	508.9	2.14	11.9
23	7.88	179.6	667.6	1.96	9.1
24	4.03	115.4	457.2	3.08	13.6
25	3.96	106.8	419.4	2.22	14.6
26	8.44	157.5	688.8	1.62	9.2
27	4.65	137.1	544.4	3.52	11.5
28	5.03	105.3	436.5	1.95	14.4
29	7.07	161.8	657.7	1.74	9.5
30	4.02	128.0	487.6	3.30	12.7
31	4.09	113.4	443.5	2.60	14.0
32	8.50	153.6	648.6	1.80	9.7
SUM	4.22	123.5	464.2	2.00	13.2
BAG	4.71	147.8	501.6	2.28	11.9
33	1.90	53.2	193.1	0.66	31.4
34	6.88	205.2	1268.3	0.88	5.5
35	6.00	200.2	959.8	1.57	6.9
36	2.59	96.9	566.8	0.46	12.2
37	1.88	68.8	388.8	0.55	17.6
38	2.14	68.8	303.2	0.87	21.2
39	2.91	95.5	336.1	1.80	17.9

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX D,CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

HOUSTON

	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID
	061	1972	FORD	GRAN	351	062	1972	FORD	STAW	400	063	1972	FORD	LTDA	429
MODE NO.	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG
1	8.24	126.9	692.6	7.13	9.7	4.21	46.0	1010.9	13.98	8.1	5.50	113.4	920.1	8.10	8.0
2	5.88	134.3	733.5	6.98	9.2	4.09	27.1	847.8	6.67	9.8	5.22	86.6	825.7	4.10	9.1
3	9.19	158.3	1083.6	6.24	6.5	8.12	42.9	1480.7	6.43	5.6	8.94	253.6	1204.6	4.91	5.4
4	3.26	75.9	680.6	8.04	11.0	3.49	17.2	734.3	7.97	11.4	3.54	74.5	735.6	8.19	10.3
5	2.49	28.0	577.9	11.28	14.1	2.61	12.2	618.1	11.89	13.7	2.50	39.4	651.4	8.52	12.7
6	2.12	15.3	484.4	7.48	17.2	2.23	8.5	533.2	7.51	16.0	2.38	31.9	526.1	6.20	15.2
7	2.81	16.9	608.5	8.24	13.8	2.87	44.5	654.9	10.10	12.1	3.40	184.8	623.3	5.12	9.6
8	2.45	141.1	540.1	7.25	11.5	2.54	37.7	581.3	8.36	13.7	3.92	159.5	561.4	5.00	10.8
9	3.33	37.2	571.0	9.11	13.9	2.56	31.5	611.6	12.05	13.3	3.45	101.3	599.9	7.02	11.5
10	2.95	57.0	535.5	6.56	14.0	2.39	18.7	620.2	9.34	13.5	4.01	106.0	582.0	5.34	11.7
11	3.95	52.3	638.7	4.96	12.1	2.60	26.1	753.8	12.76	11.1	5.98	342.8	578.2	2.27	7.8
12	3.93	140.9	696.7	7.19	9.5	2.85	21.5	782.9	11.71	10.7	6.06	208.3	703.0	5.86	8.5
13	4.74	60.3	744.1	6.83	10.4	2.77	25.1	838.2	16.00	10.0	6.05	292.3	708.1	5.40	7.5
14	2.58	84.1	533.7	4.90	13.2	1.98	10.2	581.3	9.40	14.7	4.30	143.4	524.3	4.74	11.6
15	4.76	87.6	596.1	3.15	11.9	3.17	27.4	677.9	5.65	12.1	6.04	109.9	579.6	2.73	11.5
16	10.68	185.2	1077.9	4.47	6.3	6.83	86.3	1618.4	6.94	5.0	12.76	315.1	1222.5	2.77	5.0
17	3.86	78.5	598.6	6.62	12.1	2.67	25.9	685.3	12.46	12.1	4.28	147.0	595.9	6.20	10.6
18	2.85	85.4	633.1	4.93	11.4	2.32	17.6	673.6	9.42	12.5	3.71	71.8	713.6	7.49	10.6
19	3.95	70.5	515.7	4.21	13.9	2.52	23.8	633.4	11.32	13.1	3.60	94.7	532.2	5.54	12.8
20	4.04	166.2	753.1	5.67	8.6	2.83	17.2	803.4	10.43	10.6	4.41	74.0	784.9	7.81	9.7
21	4.65	58.6	687.9	4.74	11.2	2.94	55.8	749.4	11.04	10.5	5.39	276.1	606.8	4.29	8.4
22	4.16	191.5	642.7	5.29	9.3	2.92	47.1	743.9	9.97	10.7	4.94	126.4	644.8	5.64	10.3
23	7.62	128.4	822.5	8.27	8.5	4.15	48.0	1008.3	13.75	8.1	7.01	185.3	850.0	7.86	7.6
24	2.85	39.9	625.4	6.24	12.7	2.04	10.8	647.2	13.70	13.2	2.79	72.6	587.8	7.34	12.5
25	2.56	113.0	530.9	4.19	12.4	1.91	12.5	567.8	9.02	15.0	3.17	90.1	530.0	5.14	13.0
26	7.45	124.9	863.7	3.98	8.2	4.15	60.2	945.8	7.35	8.4	7.04	132.3	779.6	4.08	8.8
27	4.03	61.8	708.4	5.51	10.8	2.40	17.4	739.2	15.76	11.5	3.71	121.0	634.7	7.57	10.6
28	4.19	86.3	567.3	4.08	12.4	2.12	12.8	649.1	8.93	13.1	4.65	95.3	554.5	4.78	12.3
29	6.67	96.5	782.3	6.16	9.3	4.10	36.9	955.9	11.73	8.6	6.30	166.0	760.8	9.02	8.5
30	3.02	57.5	611.6	4.07	12.5	2.16	17.0	665.2	14.13	12.7	2.98	77.4	595.4	8.02	12.2
31	2.63	152.0	568.3	3.84	10.9	1.93	15.0	612.8	9.45	13.8	3.19	96.3	579.4	5.72	12.0
32	8.22	191.7	811.0	3.44	7.8	3.62	33.7	968.4	7.42	8.6	7.35	142.7	787.7	3.79	8.6
SUM	2.84	60.4	598.9	5.76	12.6	2.17	18.5	643.0	9.89	13.1	3.66	121.7	596.0	5.23	11.1
RAG	3.49	92.6	670.3	5.80	10.7	2.67	24.9	715.6	10.00	11.6	4.54	166.1	651.5	5.10	9.6
33	0.99	44.9	93.2	0.01	53.1	0.49	7.6	180.9	0.02	45.6	1.75	60.8	188.2	0.82	30.7
34	8.88	428.6	1296.7	0.90	4.4	5.39	88.0	2170.8	2.49	3.8	9.26	431.5	1473.1	1.37	4.1
35	1.43	38.2	1200.1	1.36	7.0	2.67	44.0	1096.5	1.56	7.6	6.80	275.2	880.2	2.03	6.7
36	1.09	36.1	769.7	1.09	10.7	1.70	28.1	731.0	1.04	11.4	3.15	163.3	533.8	0.57	11.1
37	0.47	4.2	528.3	1.63	16.5	1.08	4.5	484.3	2.39	17.9	2.03	61.8	484.3	1.94	15.1
38	1.02	6.3	407.1	5.62	21.1	1.30	4.6	289.9	7.25	29.5	0.96	9.4	504.2	6.70	17.0
39	1.51	13.0	527.5	8.05	16.1	1.47	6.1	534.4	11.76	16.2	2.19	79.1	466.3	4.56	14.9

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 111.85 CARBON TO HYDROGEN RATIO

```
                                   APPENDIX D,CONT'D

                  LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

                                        HOUSTON

          VEH  YEAR  MAKE  MODL  CID          VEH  YEAR  MAKE  MODL  CID          VEH  YEAR  MAKE  MODL  CID
          ---  ----  ----  ----  ---          ---  ----  ----  ----  ---          ---  ----  ----  ----  ---
          064  1972  LINC  MRK4  460          065  1972  MERC  STAW  400          066  1972  OLDS  DELT  350
MODE
NO.       HC     CO     CO2    NOX   MPG       HC     CO     CO2    NOX   MPG       HC     CO     CO2    NOX   MPG
-----------------------------------------------------------------------------------------------------------------
 1       6.17  155.1   690.6 12.85   9.3      4.48  136.4   871.7 14.17   8.1      4.92   57.5   722.9  7.70  10.7
 2       5.49   52.1   949.2  6.12   8.5      4.69   73.4   801.7 10.71   9.5      6.34   95.2   708.7  6.34  10.1
 3       8.58   47.3  1408.8  8.67   5.9     10.12  201.7  1129.6  6.35   6.0     11.59  122.3  1079.2  5.24   6.8

 4       3.78   18.5   812.9  9.88  10.4      3.77   82.2   596.7  7.47  12.0      4.89   74.5   612.9  7.88  11.9
 5       2.55   14.0   691.2 13.06  12.3      2.29   30.2   535.4 10.98  15.0      3.23   40.6   589.4 10.99  13.4
 6       2.61   10.5   632.8 14.61  13.5      2.24   12.8   528.5 10.27  16.0      2.92   32.4   481.9  6.91  16.4

 7       2.49  125.3   649.3  6.53  10.4      1.84   33.8   550.7  9.89  14.6      4.39   58.1   593.7  7.79  12.7
 8       4.10  115.4   670.2  8.49  10.3      2.43   54.4   595.1 11.08  12.9      3.32   86.4   540.4  8.61  12.9
 9       3.38   46.1   654.8 13.25  12.0      1.89   30.7   524.6 11.09  15.3      3.93   47.2   584.1 11.65  13.2

10       3.81   31.4   714.9 10.39  11.4      2.59   36.6   597.8 10.73  13.4      3.67   40.0   554.2  9.40  14.1
11       7.49  198.1   690.5  5.84   8.7      2.45   70.3   620.3 13.52  12.0      4.63  112.4   652.1  8.53  10.5
12       5.05   87.9   968.5 12.84   7.9      2.81   33.3   800.4 17.72  10.3      4.69   77.0   712.1 11.81  10.5

13       4.62   72.8   824.0 14.33   9.3      2.60   64.0   722.6 18.38  10.7      5.30   92.8   731.5 11.61   9.9
14       2.92   34.2   693.2  9.60  11.7      2.05   22.0   586.6 13.33  14.1      3.52   67.6   526.7  8.32  13.8
15       3.90   22.4   751.4  5.97  11.1      3.61   71.3   496.5  7.35  14.3      6.05  102.0   493.3  3.35  13.2

16       8.82  102.0  1570.3  7.02   5.0      9.82  301.0  1184.9  7.78   5.3     13.81  277.0  1022.3  3.68   5.9
17       3.64   53.6   755.9 11.50  10.4      3.12  101.7   615.3 13.42  11.3      4.50   86.6   593.0  9.17  11.9
18       3.22   32.5   733.5  9.06  11.2      2.72   31.1   628.0 12.44  12.9      4.16   75.0   624.4  8.40  11.7

19       3.38   47.9   730.7  7.73  10.9      2.82   94.2   532.6 10.32  12.9      4.38   76.6   539.1  8.23  13.2
20       3.98   39.3   903.8  9.56   9.1      3.42   44.4   776.0 15.60  10.4      5.57  121.1   707.8  7.82   9.7
21       5.41  292.6   685.9  6.10   7.6      2.67  123.8   665.3 12.27  10.2      5.68  150.4   625.0  5.06  10.1

22       4.34  122.6   772.0  8.13   9.1      2.94   57.2   715.2 13.81  10.9      5.21  138.3   666.9  8.17   9.4
23       6.16  101.4  1051.7 11.84   7.2      4.42  146.2   830.6 10.92   8.3      8.77  147.2   835.4 10.81   8.1
24       3.23   55.4   704.9 11.43  11.1      2.03   40.7   558.9 14.39  14.1      3.91   92.9   596.5  8.99  11.8

25       2.87   36.7   670.3  8.65  12.0      2.09   25.5   601.2 14.35  13.7      3.47   60.1   535.2  9.82  13.4
26       5.51   52.6  1044.3  8.26   7.8      5.73  119.3   850.6 10.13   8.4      9.43  153.9   728.7  6.16   8.4
27       3.67   60.1   812.5 14.34   9.7      2.57   60.3   644.7 19.19  11.9      4.64  163.8   890.8 10.33   7.6

28       3.00   40.6   649.9  8.01  12.3      2.73   39.9   649.6 13.57  12.3      4.95   59.6   383.8  8.47  18.0
29       5.05   77.0   992.2 11.76   7.9      4.32  159.9   735.0  9.90   8.9      8.11  127.8   993.6 10.26   7.3
30       3.17   59.9   702.4  9.98  11.0      2.01   43.5   552.6 13.27  14.1      3.70   80.4   796.0  8.92   9.5

31       2.73   63.0   740.8  9.91  10.5      2.36   46.8   636.9 14.27  12.4      3.78  101.0   386.7  8.21  15.4
32       5.71   80.3  1021.8  8.05   7.6      5.58  118.9   860.9  8.47   8.3     10.38  155.4   568.6  6.57  10.5

SUM      3.13   54.7   712.7  9.23  11.0      2.32   51.3   576.2 11.11  13.4      3.87   69.7   577.2  7.94  12.7
RAG      3.65   88.9   800.1  9.14   9.3      2.23   59.8   666.2 12.57  11.6      3.44   46.1   664.2  9.16  11.8

33       0.58    8.7   122.8  0.12  64.2      1.46   33.6   140.0  2.92  45.0      1.81   15.1   103.4  0.11  66.8
34       5.00   79.6  1889.1  1.65   4.4      4.13  434.9  1528.0  2.15   4.0     10.98  202.1  1643.1  6.86   4.4
35       2.09   28.8   977.5  0.93   8.6      5.42  224.9   851.2  3.98   7.3      5.73   68.1   644.7  0.52  11.5
36       1.14    6.9   733.3  1.17  11.8      3.16  157.2   476.8  0.50  12.1      3.07   63.6   490.6  0.61  14.8

37       0.96    4.5   495.7  3.09  17.5      1.18   25.6   536.6  2.20  15.3      2.27   36.2   356.0  1.19  21.1
38       1.60   13.0   592.2  7.15  14.4      0.98   19.3   323.9  6.48  24.8      1.76   19.7   432.1  6.48  18.9
39       2.14   26.9   660.2 11.55  12.5      1.10   18.5   419.3 10.03  19.6      1.98   32.6   525.6  9.98  15.2

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO
```

APPENDIX D.CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

HOUSTON

VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID
067	1972	OLDS	STAW	455	068	1972	OPEL	STAW	116	069	1972	PLYM	VALI	225

MODE NO.	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG
1	5.35	53.5	851.8	9.34	9.3	3.46	82.5	529.0	3.81	13.3	4.56	99.4	539.8	5.09	12.5
2	4.24	14.2	917.8	3.75	9.3	3.10	34.4	490.1	3.50	16.0	5.25	119.4	425.9	2.29	14.1
3	7.56	22.2	1439.6	4.03	5.9	5.32	47.2	654.6	2.65	11.9	7.36	136.0	714.1	2.17	9.3
4	3.24	19.3	840.3	5.32	10.1	2.46	41.9	491.9	4.69	15.7	3.53	84.0	436.7	3.80	15.3
5	1.96	12.1	750.2	7.35	11.4	1.84	19.6	449.9	5.09	18.2	2.63	57.3	428.0	6.88	16.9
6	1.63	6.2	645.7	4.46	13.4	1.57	50.4	339.8	2.55	20.9	2.07	26.8	372.1	5.59	21.1
7	4.12	169.2	702.4	3.80	9.0	1.84	34.1	377.1	3.68	20.3	2.71	91.0	446.8	6.90	14.8
8	2.62	73.1	670.8	5.97	11.2	2.77	108.0	371.5	2.93	16.1	2.13	48.0	418.2	6.72	17.7
9	2.93	55.6	730.3	8.98	10.7	2.32	38.1	420.3	4.84	18.2	2.50	59.8	426.8	8.80	16.8
10	2.56	20.9	738.1	6.79	11.4	2.08	38.4	401.0	4.18	19.0	2.36	38.2	412.1	7.33	18.5
11	8.00	128.4	820.5	8.44	8.6	2.94	73.0	456.2	4.89	15.3	4.09	152.8	448.5	4.33	12.6
12	3.31	37.3	935.7	8.86	8.8	2.73	69.9	487.5	4.50	14.6	3.11	62.9	511.5	8.09	14.3
13	4.56	144.8	905.8	7.57	7.7	3.36	66.3	506.3	5.87	14.3	4.09	164.6	483.4	4.60	11.8
14	2.45	39.1	689.7	6.38	11.7	2.07	58.2	359.8	3.40	19.4	2.24	48.1	385.8	6.23	18.9
15	3.98	25.1	1278.3	3.33	6.7	2.57	45.8	380.9	2.07	19.3	3.36	31.9	378.7	4.23	20.2
16	8.29	40.8	1578.2	3.88	5.3	5.92	121.6	760.6	2.54	9.1	7.87	93.8	788.6	4.77	9.2
17	2.89	26.3	830.4	8.82	10.1	2.10	49.4	391.6	5.54	18.7	3.62	144.0	405.7	3.05	13.8
18	2.18	10.4	824.9	6.08	10.5	2.02	32.7	447.8	3.49	17.6	2.82	64.2	403.1	4.48	17.3
19	2.49	28.8	737.4	7.56	11.2	2.14	54.0	370.1	3.51	19.2	2.92	88.1	365.7	3.75	17.3
20	2.63	19.9	975.4	6.83	8.7	2.78	55.5	502.7	3.37	14.8	3.23	64.9	477.1	5.22	15.1
21	5.21	263.5	797.4	4.25	7.2	2.90	59.0	488.2	6.21	15.0	3.39	140.1	420.3	3.67	13.6
22	4.06	107.5	846.8	6.27	8.6	2.71	73.0	448.4	4.12	15.5	2.95	75.2	472.6	6.80	14.8
23	5.34	54.0	1127.5	9.12	7.2	3.64	85.9	540.1	5.18	12.9	5.40	97.5	566.6	6.13	12.0
24	2.47	49.5	796.5	9.27	10.1	2.21	60.2	390.2	3.51	18.0	2.83	106.5	399.3	5.33	15.4
25	2.10	19.8	713.1	5.42	11.8	1.91	58.5	371.8	2.78	18.9	2.21	54.6	368.8	4.96	19.2
26	5.42	30.1	1050.4	5.73	8.0	3.42	74.8	522.5	2.35	13.6	4.88	48.6	518.2	5.04	14.5
27	3.10	72.1	849.0	10.00	9.1	2.49	88.1	445.0	3.76	15.0	3.27	137.1	452.4	5.00	13.1
28	2.94	17.5	778.9	6.58	10.9	1.95	42.8	404.8	2.95	18.6	3.00	53.6	394.4	5.40	18.2
29	4.64	23.6	1052.6	9.16	8.0	2.87	78.5	491.7	5.00	14.2	4.45	72.7	556.3	7.05	13.0
30	2.87	87.7	771.6	7.17	9.7	1.88	54.7	388.6	3.60	18.5	2.91	123.1	409.8	4.77	14.5
31	2.53	62.7	755.8	6.77	10.3	1.48	70.3	390.3	2.99	17.6	2.46	72.2	390.4	5.09	17.3
32	5.60	58.9	1045.9	5.65	7.7	4.33	76.5	494.0	2.29	14.1	5.13	67.4	518.5	5.29	13.9
SUM	2.31	42.7	778.3	6.67	10.4	1.64	37.5	433.1	4.08	17.8	2.68	66.9	412.7	6.10	16.9
RAG	2.82	76.3	874.2	7.39	8.8	2.23	71.0	443.9	3.94	15.8	2.80	95.3	442.1	5.38	14.8
33	0.45	1.0	144.7	0.07	60.1	0.19	5.2	67.2	0.00	116	1.09	17.3	57.5	0.04	100
34	4.40	15.2	1735.9	0.83	5.0	1.83	47.1	953.2	0.55	8.6	8.73	234.4	1272.8	8.57	5.3
35	2.03	7.4	864.3	0.42	10.1	0.83	20.0	682.3	0.91	12.4	3.20	50.8	447.0	0.52	16.5
36	1.21	6.8	787.4	0.69	11.1	0.52	10.3	501.9	1.10	17.1	2.46	44.0	351.5	1.24	20.7
37	0.93	5.1	598.3	1.77	14.6	0.41	4.4	374.5	1.96	23.2	1.65	20.2	304.2	3.02	26.0
38	0.50	4.0	642.1	4.21	13.7	0.45	5.2	384.8	3.45	22.5	1.50	22.7	320.2	5.55	24.6
39	0.70	4.9	706.6	9.54	12.4	0.45	3.2	432.1	5.92	20.2	1.54	30.7	407.1	10.08	19.3

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX D,CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

HOUSTON

	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID
	070	1972	PLYM	SATE	318	071	1972	PONT	VENT	350	072	1972	PONT	BONN	455
MODE NO.	HC	CO	CO2	NOX	MPG	HC	CO	CU2	NOX	MPG	HC	CO	CO2	NOX	MPG
1	5.10	126.0	722.2	8.39	9.5	8.50	89.6	796.4	10.56	9.2	3.47	89.9	842.4	13.13	8.9
2	5.42	63.7	603.9	4.08	12.3	8.36	90.5	591.7	6.69	11.7	1.04	33.3	743.7	4.64	11.1
3	10.18	206.9	991.5	4.75	6.6	13.94	116.0	897.0	5.07	7.9	1.20	135.6	1004.0	6.01	7.3
4	4.53	68.7	627.5	6.39	11.8	4.36	90.3	715.9	5.11	10.2	2.94	46.5	710.7	11.09	11.2
5	2.89	22.9	566.1	7.32	14.5	3.33	29.9	612.1	12.01	13.3	3.75	14.7	654.6	13.73	12.9
6	2.42	9.2	400.5	3.90	21.0	2.94	20.1	508.1	6.74	16.2	1.63	6.0	593.5	6.18	14.6
7	3.71	51.1	631.4	9.32	12.3	3.08	22.3	632.8	11.22	13.1	4.66	33.5	727.6	16.88	11.2
8	2.66	25.4	440.3	5.60	18.2	3.10	93.7	599.6	8.85	11.7	2.73	16.9	738.9	9.98	11.5
9	2.88	25.6	567.0	9.78	14.4	3.16	32.6	634.6	15.50	12.8	4.94	11.1	689.9	17.82	12.3
10	2.65	16.7	453.8	5.22	18.2	2.92	18.9	588.3	9.68	14.1	2.76	7.6	709.0	10.16	12.2
11	3.34	51.2	654.6	10.56	11.9	3.82	45.1	712.1	13.08	11.2	5.42	30.1	775.3	19.58	10.6
12	3.40	21.6	620.9	7.78	13.3	3.65	44.6	769.1	11.53	10.4	3.56	12.3	921.8	13.09	9.3
13	4.08	70.8	639.7	10.14	11.6	3.76	42.4	817.8	15.27	9.9	5.71	25.9	846.5	20.68	9.8
14	2.55	21.6	459.0	5.64	17.7	2.45	20.1	555.1	8.61	14.9	3.32	7.4	686.0	12.13	12.5
15	4.66	62.4	477.9	3.39	15.0	5.48	56.6	534.8	5.04	13.8	1.65	21.6	681.4	6.54	12.3
16	11.71	271.5	942.0	3.24	6.3	13.02	157.0	1078.9	5.22	6.5	1.51	114.5	1182.8	7.38	6.5
17	4.09	100.0	533.3	7.19	12.6	4.11	75.0	654.2	11.01	11.3	4.00	59.6	671.6	14.73	11.4
18	3.17	28.7	537.3	5.14	15.0	3.60	39.0	640.6	9.79	12.4	2.90	13.0	734.5	10.81	11.6
19	3.79	86.8	464.3	6.60	14.5	3.64	60.0	594.3	8.43	12.7	2.90	38.2	614.5	10.77	13.0
20	4.05	40.7	616.6	6.01	12.8	4.28	42.5	718.0	9.87	11.1	3.11	20.2	863.5	11.67	9.8
21	3.96	104.5	636.0	8.03	10.9	4.36	37.9	717.5	10.47	11.2	4.17	74.0	785.2	15.20	9.7
22	3.48	38.6	550.4	6.91	14.3	4.22	79.6	703.9	11.39	10.5	3.23	29.7	808.5	11.91	10.3
23	5.81	121.3	727.7	8.39	9.5	7.53	79.7	836.0	9.72	9.0	3.98	98.7	898.8	15.00	8.3
24	2.90	39.4	540.1	8.42	14.5	3.09	36.1	649.9	10.42	12.4	4.89	14.3	717.3	17.68	11.7
25	2.49	20.9	455.3	5.50	17.9	2.54	18.2	561.5	8.72	14.8	2.93	10.2	660.0	10.72	13.0
26	6.81	99.1	657.7	3.87	10.6	10.82	75.9	771.4	7.76	9.6	2.21	38.2	914.2	8.82	9.0
27	3.61	65.1	608.8	9.57	12.3	3.79	50.2	707.4	16.11	11.1	5.07	33.1	815.1	18.40	10.0
28	4.02	44.1	461.9	4.72	16.3	3.98	24.8	616.4	9.02	13.3	2.74	14.2	686.9	10.15	12.4
29	6.64	143.3	649.9	8.43	9.9	7.42	91.4	798.6	8.47	9.2	3.31	104.3	867.4	12.56	8.5
30	3.42	59.3	550.1	8.95	13.6	3.23	36.1	664.7	15.56	12.1	4.75	18.7	743.6	17.19	11.3
31	2.75	26.5	484.8	6.18	16.6	2.99	33.9	598.7	8.25	13.4	3.23	10.7	709.0	11.79	12.1
32	7.61	110.4	637.9	4.09	10.6	9.20	79.9	745.2	6.68	9.9	2.01	41.8	894.9	8.09	9.2
SUM	3.00	43.0	523.0	6.80	14.8	3.39	38.6	622.8	10.21	12.8	2.99	21.9	719.6	12.35	11.6
RAG	3.12	55.4	584.9	7.01	13.0	4.02	46.0	707.3	10.78	11.2	3.70	27.6	818.4	13.17	10.2
33	1.15	38.1	81.6	0.08	61.1	1.77	42.5	70.1	0.02	62.3	1.04	19.3	95.0	0.03	68.9
34	10.24	366.7	1407.8	6.10	4.4	15.05	437.7	968.3	0.21	5.2	13.19	211.1	1154.3	0.42	5.8
35	4.38	166.0	609.4	0.49	10.0	6.00	187.3	603.5	0.21	9.7	5.74	81.6	720.2	0.52	10.2
36	2.77	86.1	533.4	0.64	13.1	3.74	105.2	528.9	0.42	12.6	2.63	15.2	619.6	1.04	13.6
37	2.25	19.0	383.0	2.84	21.1	2.13	9.0	473.7	4.31	17.9	1.56	6.7	562.7	3.48	15.3
38	1.29	6.8	408.4	4.42	21.0	1.84	8.0	508.3	8.59	16.9	1.23	4.8	602.1	8.59	14.5
39	1.51	8.8	477.6	8.94	17.9	1.75	7.5	580.9	12.79	14.8	1.38	6.3	693.1	15.20	12.5

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX D,CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

HOUSTON

```
           VEH  YEAR  MAKE  MODL  CID          VEH  YEAR  MAKE  MODL  CID          VEH  YEAR  MAKE  MODL  CID
           ---  ----  ----  ----  ---          ---  ----  ----  ----  ---          ---  ----  ----  ----  ---
           073  1972  TOYO  CARI   97          074  1972  VOLK  SEDA   97          075  1972  VOLK  SEDA   97

MODE
NO.      HC     CO    CO2    NOX   MPG       HC     CO    CO2    NOX   MPG       HC     CO    CO2    NOX   MPG
----------------------------------------------------------------------------------------------------------------
 1      6.49   47.3  336.5  3.54 20.6      4.50   43.6  408.5  4.62 18.1      6.71   58.6  498.6  4.89 14.5
 2      5.88   40.1  492.5  5.57 15.5      4.31   37.1  375.1  4.19 19.9      4.07   38.8  379.1  3.25 19.6
 3      8.07   61.8  530.0  4.11 13.6     10.31   57.2  573.7  3.69 12.7      8.27   58.4  563.4  2.45 13.0

 4      4.33   34.2  390.2  6.17 19.4      3.76   37.4  360.1  5.16 20.6      4.00   37.7  354.4  3.47 20.8
 5      3.39   46.4  368.3  6.22 19.6      2.23   17.9  326.8  7.59 24.5      2.47   19.2  332.3  6.29 24.0
 6      3.04   29.6  365.7  6.62 21.0      1.76   20.7  322.6  5.62 24.6      2.24   21.2  299.0  3.33 26.2

 7      3.65   76.7  380.3  7.37 17.3      2.15   25.5  321.2  7.56 24.1      2.32   24.4  331.5  7.05 23.5
 8      3.37   59.4  367.6  5.71 18.8      1.81   38.3  314.2  4.70 23.4      2.52   39.5  288.8  5.31 24.7
 9      3.27   53.4  358.6  7.94 19.6      1.71   25.9  299.3  7.29 25.7      2.09   26.2  320.7  7.49 24.1

10      3.26   38.3  363.9  6.64 20.4      1.62   31.8  303.7  5.22 24.7      2.24   32.4  301.2  4.97 24.7
11      4.56  107.1  366.3  5.11 16.2      3.38   47.6  389.6  8.80 18.7      3.09   46.6  396.6  9.03 18.5
12      4.36   62.3  459.5  7.69 15.5      2.84   46.8  416.1  7.25 17.8      2.78   44.5  414.9  6.15 18.0

13      5.20  121.9  417.0  5.26 14.2      4.52   52.0  425.2  9.97 17.0      3.70   53.7  449.9  9.49 16.3
14      3.52   53.2  345.5  5.46 20.2      2.21   34.8  289.4  4.81 25.3      2.55   34.9  281.9  4.33 25.7
15      5.65   70.6  325.4  3.30 19.5      2.90   32.8  313.9  3.42 23.7      4.25   34.7  314.9  2.52 23.2

16     13.12  169.6  573.1  3.18 10.1      7.14   93.9  631.7  4.56 11.1     11.86   97.4  658.9  3.38 10.4
17      4.64   89.3  300.2  4.05 19.5      3.63   40.9  357.6  8.66 20.5      4.42   43.1  371.6  7.81 19.6
18      4.57   54.8  398.2  4.18 17.8      2.74   36.0  393.0  5.90 19.4      3.00   36.8  342.7  3.94 21.6

19      4.21   79.5  278.1  4.59 21.3      3.04   29.7  308.9  6.93 24.3      4.28   30.6  390.7  6.00 19.6
20      5.12   58.6  429.8  4.43 16.5      3.23   40.3  462.5  6.84 16.6      3.74   41.7  417.9  4.03 17.9
21      4.38  116.0  358.9  4.70 16.0      3.50   43.5  367.2  8.93 19.9      3.49   42.5  388.0  7.20 19.1

22      4.75   65.7  418.9  5.09 16.5      3.20   48.2  360.1  5.36 19.9      3.76   48.0  353.7  5.96 20.1
23      6.61   85.7  394.4  4.96 16.1      4.79   48.2  471.7  7.91 15.8      6.75   45.5  509.1  5.69 14.7
24      3.99   85.6  324.0  4.12 18.8      3.04   25.4  405.5 11.24 19.5      2.61   23.5  410.2  6.90 19.5

25      3.55   43.5  353.9  4.68 20.5      2.25   50.5  288.7  3.80 23.7      2.12   55.1  287.1  4.10 23.3
26      7.88   94.9  451.7  3.55 14.2      4.10   55.1  417.4  4.37 17.2      5.99   65.0  417.0  3.07 16.5
27      4.73  108.0  365.2  4.51 16.1      3.30   39.8  383.2 10.36 19.5      3.33   37.5  446.9  8.77 17.2

28      4.42   57.9  368.2  4.63 18.8      2.35   28.2  322.8  4.81 23.7      2.93   26.5  267.4  4.10 26.2
29      6.75   90.6  366.3  3.90 16.7      4.38   35.5  470.9  9.13 16.4      5.85   31.4  491.9  6.03 15.9
30      4.17   98.0  337.1  4.22 17.6      3.14   35.7  437.4 12.04 17.6      2.70   30.0  422.1  8.89 18.6

31      3.76   64.6  365.7  4.56 18.5      3.76   35.0  344.3  5.46 21.6      2.26   28.5  342.2  4.00 22.5
32      7.74  105.3  427.7  3.34 14.4      5.53   46.3  447.8  4.84 16.5      7.45   40.1  438.5  3.24 16.9


SUM    3.66    52.0  362.1  5.69 19.5     2.22    26.7  354.2  6.96 22.0     2.77    41.9  353.4  5.69 20.7
BAG    4.08    60.1  377.5  4.94 18.3     2.94    40.6  382.2  7.00 19.5     3.23    41.1  355.2  5.87 20.6


33      0.56    1.9   32.0  0.00  241      0.18    3.1   80.8  0.01  102      1.15   14.1   79.9  0.80 84.0
34      7.40   17.3 1005.5  0.41  8.4      2.48   44.3  982.8  0.55  8.4      5.65  194.4  657.2  0.67  9.1
35      4.94   37.9  439.5  1.03 17.2      1.54   35.0  631.8  0.28 12.8      5.51  206.2  489.5  1.24 10.7
36      3.81   35.9  330.7  0.69 22.2      1.10   29.7  384.4  0.77 20.4      2.97  108.8  319.7  0.37 17.7

37      2.19    7.7  304.9  3.30 27.4      0.80    4.2  284.0  2.76 30.3      2.13   81.2  236.1  0.66 24.0
38      2.00    8.7  321.4  6.88 26.0      1.16    9.7  333.9  7.79 25.2      1.63   40.1  266.2  2.93 26.5
39      2.56   25.2  350.1  8.45 21.8      1.06   10.6  304.1  8.54 27.4      1.31   17.5  341.1  7.77 23.8


EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO
```

APPENDIX D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

DETROIT

	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID
	001	1974	BUIC	ELEC	455	002	1974	CHEV	MONT	400	003	1974	CHEV	IMPA	350
MODE NO.	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG
1	5.87	107.6	874.8	2.79	8.4	2.22	29.5	647.4	4.29	12.7	4.89	75.7	683.7	3.97	10.8
2	4.51	65.5	970.8	1.88	8.2	2.09	32.0	848.7	2.23	9.8	4.29	34.1	930.0	5.74	8.9
3	7.56	76.9	1550.2	3.01	5.2	3.41	47.1	1279.3	3.01	6.5	6.50	33.4	1003.1	6.39	8.2
4	3.37	37.3	780.8	2.23	10.4	1.34	20.8	687.6	2.57	12.3	2.33	14.2	733.0	4.45	11.6
5	2.45	42.5	711.1	2.73	11.3	0.97	16.0	595.0	3.72	14.2	1.56	24.4	608.6	5.05	13.6
6	1.75	18.3	664.6	2.18	12.7	0.85	11.5	547.6	1.96	15.6	1.90	11.1	600.7	4.35	14.2
7	4.16	226.3	698.0	2.49	8.3	1.49	75.2	611.1	3.06	12.1	2.76	112.8	645.4	3.98	10.7
8	2.99	83.5	706.5	3.59	10.5	1.06	47.1	569.1	2.35	13.7	2.01	45.5	654.4	4.45	12.1
9	3.40	165.2	663.1	2.84	9.5	1.02	26.8	580.0	4.10	14.2	2.00	75.3	625.6	4.59	11.8
10	3.30	62.1	771.0	3.97	10.1	1.03	18.9	643.1	2.79	13.1	2.87	29.4	729.8	5.13	11.3
11	3.97	264.1	739.7	2.35	7.6	1.49	66.2	661.3	3.99	11.5	3.24	147.5	704.2	3.44	9.4
12	3.94	89.9	969.6	4.81	7.9	1.30	41.6	785.1	3.48	10.4	3.31	55.6	902.0	5.92	8.9
13	4.06	213.8	922.4	2.98	7.0	1.83	103.2	729.8	4.05	9.9	3.27	155.8	802.9	4.04	8.4
14	3.19	64.9	745.0	3.86	10.4	1.03	35.7	592.7	2.58	13.6	2.24	46.7	666.6	3.66	11.9
15	2.43	35.4	818.0	2.18	10.1	1.42	23.0	738.2	1.74	11.4	4.18	28.0	733.0	2.80	11.2
16	6.26	60.2	1785.1	4.02	4.7	3.12	37.5	1587.3	2.85	5.4	7.66	85.0	1586.1	3.33	5.1
17	2.20	97.9	769.5	2.74	9.5	1.29	50.9	674.4	4.23	11.7	2.19	80.4	639.7	4.57	11.5
18	2.18	42.2	855.0	2.64	9.6	1.02	22.6	669.5	2.48	12.5	1.90	51.6	742.8	4.07	10.7
19	2.12	75.7	715.4	2.64	10.6	0.94	30.8	655.1	3.62	12.6	1.98	38.9	643.6	4.57	12.5
20	2.63	48.4	1014.7	3.06	8.1	1.19	24.3	810.2	2.85	10.4	2.48	65.4	817.7	4.64	9.6
21	4.36	270.5	780.4	2.43	7.3	1.94	142.8	672.5	3.11	9.8	12.37	238.2	765.9	3.26	7.5
22	3.53	133.8	1026.4	3.88	7.1	1.65	63.6	756.8	2.79	10.3	6.87	106.3	905.1	3.71	8.1
23	4.15	96.5	1177.9	3.99	6.6	2.22	53.2	1026.0	4.38	7.9	6.42	104.6	1112.0	5.07	6.8
24	2.61	115.1	693.6	2.19	10.1	0.96	31.8	588.4	3.88	13.8	2.05	83.4	671.1	4.24	11.0
25	2.28	75.4	740.6	3.70	10.2	0.84	22.8	598.7	2.79	13.9	1.19	49.9	687.8	3.65	11.5
26	4.06	64.4	1185.3	3.03	6.8	2.07	25.0	1057.3	2.83	8.0	2.25	63.3	1119.1	3.49	7.2
27	2.83	128.7	828.1	2.58	8.5	1.31	54.8	684.1	4.30	11.5	2.21	131.6	742.2	3.36	9.3
28	2.04	58.0	814.0	3.96	9.7	0.93	25.3	696.4	2.97	12.0	1.09	56.7	798.5	3.91	10.0
29	3.09	62.8	1103.2	3.93	7.3	1.58	30.9	975.9	4.43	8.6	1.84	76.4	1005.7	4.95	7.8
30	3.20	220.2	705.9	1.72	8.4	1.03	50.9	621.8	3.91	12.6	1.36	85.5	652.1	3.47	11.2
31	3.04	134.5	717.9	3.36	9.5	1.10	35.3	597.3	2.59	13.5	1.17	67.8	689.0	2.99	11.1
32	4.59	113.3	1159.7	3.02	6.6	2.40	38.3	1026.9	2.70	8.1	2.15	65.9	1055.3	2.92	7.6
SUM	2.21	74.8	673.4	3.02	11.1	0.93	31.9	651.8	3.11	12.6	2.01	53.8	707.0	4.12	11.1
HAG	1.77	83.7	578.8	2.35	12.4	1.08	52.6	698.8	3.61	11.3	2.71	82.1	774.9	4.55	9.7
33	0.43	1.7	101.8	0.22	83.8	0.30	4.5	126.0	0.20	66.3	0.42	1.6	122.4	0.22	70.3
34	3.40	28.0	1293.6	2.11	6.6	2.71	30.6	1505.1	1.84	5.7	4.20	9.8	1449.3	2.03	6.0
35	1.76	8.5	759.8	1.48	11.4	1.13	22.1	813.6	0.84	10.4	1.68	4.3	801.5	0.91	10.9
36	1.25	4.5	497.6	1.14	17.5	0.58	17.8	704.1	1.04	12.1	0.84	3.3	689.2	0.92	12.7
37	0.84	2.6	406.3	0.54	21.5	0.43	11.4	545.3	0.64	15.7	0.73	2.5	501.6	1.87	17.5
38	0.64	2.3	385.8	1.89	22.7	0.31	6.0	545.1	1.93	16.0	0.44	5.5	550.1	3.87	15.8
39	0.43	6.1	461.2	4.68	18.8	0.19	6.3	563.5	4.26	15.5	0.15	13.6	673.4	5.65	12.8

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX D,CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

DETROIT

	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID
	004	1974	DODG	DART	318	005	1974	FORD	TORI	302	006	1974	FORD	LTD	351
MODE NO.	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG
1	4.12	87.6	434.4	2.24	15.2	6.45	125.6	479.2	5.46	12.7	1.92	14.6	634.9	2.78	13.4
2	4.75	71.5	692.8	2.91	10.8	5.20	62.2	726.6	4.53	10.6	3.27	21.4	875.6	4.65	9.7
3	7.94	164.0	916.8	2.46	7.4	9.58	188.2	919.5	5.12	7.1	4.72	24.8	1307.4	4.78	6.5
4	3.39	61.3	516.3	1.49	14.2	3.75	58.1	586.2	5.02	12.9	2.26	11.4	732.7	2.79	11.7
5	2.52	24.0	464.1	3.09	17.4	2.30	16.7	462.6	6.15	17.9	1.83	7.0	633.5	4.70	13.6
6	2.57	18.0	483.8	2.74	17.1	2.01	11.6	513.9	3.71	16.5	1.77	10.1	596.2	2.38	14.4
7	2.65	32.7	472.6	3.95	16.7	3.01	59.6	561.1	5.83	13.4	2.68	63.0	647.2	5.05	11.8
8	2.36	21.5	535.6	3.77	15.4	2.71	40.7	532.5	4.77	14.7	2.28	37.1	613.1	2.81	13.1
9	2.73	25.1	504.3	2.79	16.1	3.01	42.4	571.6	6.27	13.7	2.68	30.5	642.0	4.98	12.7
10	3.07	23.0	575.2	3.50	14.3	3.26	27.7	608.1	5.58	13.4	2.74	18.2	683.5	3.11	12.3
11	3.01	47.5	530.4	4.54	14.4	4.19	108.2	567.4	6.38	11.8	3.48	84.7	676.0	5.95	10.8
12	3.90	32.0	695.4	5.44	11.7	4.32	56.2	718.1	7.03	10.8	3.80	42.0	842.1	4.16	9.6
13	3.73	47.7	648.0	5.96	12.1	4.93	119.1	651.7	6.75	10.4	4.13	74.2	807.2	6.10	9.5
14	2.82	24.5	500.4	3.32	16.2	3.10	43.9	533.3	5.09	14.5	2.59	27.6	626.4	3.22	13.1
15	4.70	61.6	540.6	2.09	13.6	5.54	48.9	584.0	3.57	13.1	3.65	20.1	701.9	2.95	11.9
16	11.65	283.1	1058.0	2.99	5.8	12.66	175.7	1082.7	4.66	6.3	8.16	33.9	1426.9	4.52	5.9
17	3.90	77.1	537.3	3.55	13.2	4.16	103.9	540.0	4.62	12.4	3.07	51.7	674.4	5.59	11.6
18	3.29	37.6	570.7	2.74	13.9	3.28	47.2	609.1	1.19	12.8	2.99	25.6	710.9	3.44	11.7
19	4.48	81.5	485.2	2.45	14.1	3.56	62.2	531.8	4.78	13.9	2.73	41.5	604.7	4.28	13.1
20	4.33	49.3	667.7	2.90	11.7	4.40	51.4	715.8	5.18	10.9	3.89	38.0	840.3	4.15	9.7
21	3.77	70.5	610.0	6.08	12.1	4.32	119.0	635.5	7.64	10.6	4.12	147.5	749.1	5.53	8.9
22	4.02	43.8	613.0	4.30	12.8	4.22	61.5	676.0	7.31	11.3	4.29	66.9	781.6	3.77	9.9
23	6.56	97.3	813.3	4.17	9.0	8.27	113.0	878.8	8.14	8.2	6.21	40.0	1041.0	5.69	7.9
24	2.93	31.0	498.1	4.52	16.0	2.79	31.8	569.5	6.85	14.1	2.68	22.3	634.3	6.46	13.1
25	2.94	22.3	496.4	3.44	16.4	2.50	21.7	538.0	5.76	15.3	2.44	17.0	616.8	3.51	13.6
26	6.69	74.5	764.2	3.16	9.8	7.13	52.9	846.2	6.11	9.3	5.30	19.8	1017.1	4.66	8.3
27	3.45	51.7	571.8	4.52	13.4	3.74	78.4	599.1	6.89	12.1	3.03	39.2	715.8	7.55	11.3
28	3.71	36.0	559.1	3.88	14.1	3.82	39.6	623.1	6.24	12.7	3.23	20.1	723.0	4.04	11.6
29	6.10	110.7	713.5	2.97	9.8	6.57	99.2	770.3	7.39	9.4	4.75	17.9	972.4	5.17	8.7
30	3.12	45.6	516.9	4.13	14.8	2.90	36.3	592.8	7.23	13.5	2.63	36.2	642.5	6.05	12.5
31	2.95	36.6	507.5	2.69	15.5	2.68	33.8	548.2	5.18	14.6	2.76	29.0	635.9	3.54	12.9
32	6.47	99.9	730.3	2.53	9.8	7.52	66.6	832.7	5.53	9.2	5.77	30.0	1031.1	5.09	8.1
SUM	3.03	37.8	526.3	3.73	14.9	2.88	41.0	587.2	5.73	13.4	2.75	29.8	653.3	4.23	12.5
HAG	3.38	45.1	570.7	3.76	13.6	3.63	56.7	619.9	6.66	12.3	3.10	40.7	740.7	4.35	10.9
33	0.61	18.7	84.8	0.06	76.5	0.51	15.5	47.8	0.11	120	0.40	0.5	114.5	0.13	76.2
34	6.98	236.2	1010.7	0.42	6.3	9.05	279.0	881.7	1.58	6.6	4.10	7.9	1407.5	1.26	6.2
35	3.66	123.8	582.3	0.24	11.3	3.76	90.2	567.7	0.53	12.3	2.14	5.7	767.2	0.58	11.3
36	3.67	133.3	486.9	0.26	12.5	1.70	15.3	601.4	0.91	14.1	1.64	7.2	692.3	0.98	12.5
37	1.89	21.7	393.0	1.50	20.5	0.98	4.7	513.3	2.20	16.9	1.39	2.8	462.2	2.52	18.8
38	1.77	6.7	437.6	1.99	19.6	0.89	4.8	563.9	2.75	15.5	2.02	6.1	490.7	6.50	17.5
39	2.13	10.4	461.7	5.39	18.3	1.70	6.5	543.8	8.36	15.9	2.29	18.7	550.6	2.77	15.1

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX D,CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

DETROIT

	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID
	007	1974	OLDS	CUTL	350	008	1974	PLYM	SATE	318	009	1974	PONT	BONN	400
MODE NO.	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG
1	2.63	58.9	538.0	1.84	13.9	6.77	160.5	400.9	2.80	13.2	4.09	4.4	684.3	3.07	12.6
2	2.49	6.4	903.1	3.93	9.6	6.00	84.0	696.4	3.33	10.5	3.92	18.4	1033.2	2.96	8.3
3	3.64	7.3	1190.4	3.34	7.3	11.72	184.1	861.3	2.79	7.5	6.19	7.3	1440.8	2.78	6.0
4	1.72	5.2	550.0	2.18	15.7	4.04	85.7	556.0	1.97	12.6	2.09	5.2	847.1	1.79	10.3
5	1.64	6.3	501.7	3.74	17.2	2.52	32.4	494.0	3.19	16.1	1.60	4.9	703.1	2.84	12.4
6	1.43	4.9	616.8	3.05	14.1	2.47	18.0	506.6	1.86	16.4	2.01	4.5	632.9	2.75	13.7
7	3.01	51.4	491.0	3.19	15.3	2.97	51.2	548.8	5.03	13.9	3.06	37.9	657.1	3.47	12.2
8	2.31	69.0	658.7	3.52	11.5	1.98	37.8	572.3	3.73	13.9	2.76	50.3	671.7	4.42	11.7
9	2.62	33.5	538.5	4.26	14.8	3.27	27.4	546.9	4.42	14.8	2.98	23.2	648.1	4.49	12.8
10	2.52	33.2	729.0	4.11	11.2	3.53	30.9	615.2	3.85	13.2	2.93	14.2	763.2	4.96	11.2
11	3.64	116.1	566.1	4.38	11.7	3.66	54.7	635.0	6.96	12.1	3.27	42.5	744.3	4.85	10.8
12	3.39	43.3	933.9	5.90	8.8	4.35	38.5	764.3	5.74	10.6	3.95	35.6	922.6	6.58	9.0
13	3.77	81.1	735.8	5.95	10.1	4.73	44.3	710.8	7.89	11.2	3.99	72.6	847.2	6.19	9.1
14	2.45	35.7	627.0	4.51	12.8	3.34	28.4	560.7	4.51	14.4	2.85	21.6	673.8	4.49	12.4
15	3.30	19.6	672.2	4.04	12.4	5.72	64.1	569.9	2.62	12.9	4.92	10.9	729.7	5.92	11.6
16	6.21	23.8	1413.5	4.40	6.0	13.51	270.3	1079.6	3.76	5.7	9.82	10.2	1540.8	11.90	5.6
17	2.51	15.7	654.2	5.42	12.9	4.22	85.6	589.0	4.35	12.0	3.16	30.4	702.4	4.41	11.7
18	1.95	6.8	702.7	4.18	12.3	3.47	41.1	566.5	3.45	13.8	3.04	10.6	730.8	3.25	11.7
19	2.19	21.0	590.2	4.22	14.1	3.08	69.3	576.2	3.77	12.8	2.92	15.3	659.4	4.05	12.8
20	2.37	14.5	843.8	4.89	10.2	4.36	49.3	678.3	3.97	11.5	4.16	9.2	870.6	4.04	9.9
21	4.05	161.5	672.8	4.88	9.4	4.79	123.7	661.5	5.55	10.2	3.45	133.8	711.6	4.14	9.5
22	3.44	75.1	753.0	4.67	10.1	4.90	65.1	680.1	4.51	11.1	4.55	56.6	837.1	4.52	9.4
23	4.42	37.1	986.2	5.13	8.4	8.12	101.3	813.5	4.46	8.9	6.35	28.7	1011.0	4.95	8.2
24	2.34	24.2	572.9	5.87	14.4	3.07	33.2	564.9	5.42	14.2	2.69	21.8	625.0	5.18	13.3
25	2.21	17.3	634.3	5.01	13.3	3.15	23.5	559.3	4.09	14.6	2.61	11.3	684.2	5.10	12.5
26	4.84	22.5	969.9	4.98	8.7	8.99	89.3	798.7	3.79	9.2	6.75	5.8	1036.9	8.13	8.3
27	3.11	71.9	675.1	5.04	11.1	3.74	58.0	643.3	6.60	11.9	3.11	31.0	754.1	6.05	10.9
28	2.68	31.4	696.8	4.76	11.8	4.27	41.7	598.8	4.18	13.1	3.57	11.4	741.9	4.25	11.5
29	3.64	19.5	878.5	4.55	9.6	7.77	128.4	762.3	3.65	9.0	5.47	7.5	957.4	4.60	9.0
30	2.61	51.3	569.1	5.20	13.5	2.86	40.5	607.5	5.31	13.0	3.95	53.3	662.4	4.73	11.7
31	2.57	58.3	638.1	4.36	12.0	3.67	27.9	559.1	4.42	14.4	2.94	33.6	685.3	4.19	11.9
32	4.92	63.3	934.0	4.36	8.5	8.82	91.3	797.5	4.44	9.2	6.74	27.7	999.2	4.06	8.3
SUM	2.28	31.8	640.7	4.39	12.7	3.50	47.4	546.6	4.36	14.0	2.62	22.0	704.8	4.44	11.9
BAG	2.78	52.7	696.7	4.75	11.3	3.98	55.4	636.7	4.54	12.1	3.54	49.4	784.3	4.60	10.2
33	0.57	6.7	186.2	0.59	44.7	1.06	36.7	56.7	0.05	75.4	0.49	0.8	123.6	0.16	70.2
34	4.19	22.8	1701.0	3.06	5.1	14.13	497.8	619.1	0.40	6.1	5.32	29.3	1770.1	3.22	4.8
35	1.11	7.8	919.9	1.00	9.5	6.27	260.5	455.2	0.31	10.0	1.98	4.1	819.7	0.61	10.7
36	1.03	4.2	620.3	0.74	14.1	3.31	147.7	410.3	0.36	13.6	1.60	6.1	857.0	0.90	10.2
37	1.37	2.7	424.7	2.90	20.5	2.72	35.2	342.2	2.38	21.9	1.13	3.1	513.5	1.08	17.0
38	1.23	3.1	474.8	2.64	18.4	2.08	5.4	419.9	2.02	20.4	1.48	6.7	525.1	2.52	16.4
39	1.20	4.3	578.2	5.12	15.1	2.18	12.1	467.0	5.39	18.0	1.29	5.6	626.6	6.46	13.9

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX D, CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

DETROIT

	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID
	010	1974	VOLK	SEDA	97	011	1973	AMMO	HORN	258	012	1973	BUIC	LESA	350
MODE NO.	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG
1	5.33	49.2	227.4	3.36	27.6	2.05	18.3	493.1	3.76	16.8	5.10	53.6	491.8	4.07	15.0
2	6.24	66.5	507.5	2.49	14.0	1.72	28.6	655.2	3.48	12.6	4.19	36.9	722.8	3.02	11.2
3	9.90	86.2	560.2	2.23	12.2	2.82	29.1	972.0	4.42	8.6	6.59	73.9	988.3	3.01	7.9
4	4.62	45.7	294.9	1.80	23.3	1.08	9.1	519.8	4.07	16.5	2.62	22.5	564.6	3.23	14.6
5	2.74	21.8	268.9	2.92	28.5	0.72	7.0	494.7	5.44	17.5	1.65	6.0	509.9	4.12	16.9
6	2.11	15.9	313.1	2.26	25.7	0.77	6.9	438.3	4.78	19.7	1.52	5.2	526.0	3.12	16.5
7	2.27	22.7	270.7	3.66	28.3	1.63	56.9	468.2	3.99	15.8	2.34	51.4	531.5	5.34	14.3
8	2.57	37.8	278.2	2.45	25.7	1.50	50.4	462.0	5.22	16.3	1.89	36.3	610.3	5.99	13.2
9	3.01	37.3	277.4	4.10	25.7	1.76	[illegible]	[illegible]	5.71	17.6	1.85	15.3	558.8	6.90	15.1
10	2.66	29.1	302.3	2.73	24.9	1.58	31.9	495.7	6.56	16.1	2.07	8.6	655.1	6.23	13.1
11	4.17	42.9	291.2	4.65	23.9	2.61	102.2	484.6	3.91	13.6	2.12	32.8	649.3	8.49	12.5
12	3.83	34.0	354.0	3.59	21.2	2.22	57.0	622.1	8.10	12.3	2.62	15.0	812.3	8.57	10.5
13	4.40	44.7	347.5	5.69	20.6	3.16	112.5	562.7	4.91	11.8	2.58	34.1	746.8	10.16	11.0
14	2.49	20.4	273.7	2.80	28.3	1.74	46.8	459.1	5.57	16.5	1.76	12.5	603.2	6.38	14.1
15	6.52	30.1	268.4	1.75	26.4	2.35	34.5	562.4	3.80	14.2	2.72	11.5	629.8	3.48	13.5
16	16.11	68.8	527.6	2.08	12.9	5.91	102.6	1071.8	5.14	7.1	5.80	47.8	1256.8	4.27	6.6
17	4.36	34.2	292.0	4.81	24.7	2.38	85.6	452.5	3.79	14.9	1.98	19.9	586.9	5.88	14.2
18	3.54	34.1	437.3	2.48	17.7	2.01	44.2	515.9	5.17	15.0	1.82	8.9	649.6	4.98	13.3
19	4.30	28.2	293.6	4.23	25.3	2.17	71.4	436.2	3.89	16.0	1.73	12.2	537.9	4.68	15.8
20	3.86	22.8	384.0	3.07	20.5	2.55	60.0	615.3	6.07	12.4	2.17	9.7	771.8	5.91	11.2
21	3.73	51.3	330.8	5.13	21.0	3.34	142.6	473.7	3.61	12.5	2.88	125.7	665.1	5.90	10.0
22	3.70	40.9	328.7	2.92	21.9	2.66	73.2	613.3	5.99	12.0	2.84	48.6	737.6	6.39	10.8
23	5.88	55.7	409.3	4.28	17.2	4.11	59.7	771.1	7.46	10.1	5.49	47.8	867.6	7.23	9.2
24	2.72	24.6	274.7	4.61	27.6	1.39	52.4	490.4	5.07	15.4	1.91	11.2	575.5	7.39	14.8
25	2.56	13.1	265.0	2.52	30.2	1.61	40.2	459.8	5.93	16.8	1.66	7.0	606.0	6.46	14.3
26	8.17	47.1	382.2	2.21	18.4	3.53	41.5	784.4	5.63	10.3	3.89	10.8	877.2	4.85	9.8
27	3.93	40.2	332.9	5.19	21.7	2.54	91.6	518.6	5.00	13.2	1.97	19.7	685.7	9.49	12.3
28	3.15	25.0	321.6	2.72	23.9	1.79	35.6	554.0	6.64	14.4	2.21	6.3	667.4	9.48	13.0
29	5.00	44.8	353.8	3.02	20.2	3.22	45.1	714.4	6.77	11.2	3.56	24.0	805.4	6.48	10.4
30	2.24	22.1	281.0	4.26	27.5	2.48	91.4	469.2	3.55	14.3	1.76	15.9	594.1	7.96	14.2
31	2.23	22.3	281.8	2.54	27.4	1.83	55.9	480.6	5.21	15.5	1.74	12.9	637.5	7.32	13.4
32	7.02	40.9	398.7	2.40	18.3	3.63	60.3	817.0	5.49	9.6	3.69	11.3	905.1	6.02	9.5
SUM	2.70	24.8	[illegible]	3.14	25.2	1.42	38.6	501.4	5.40	15.7	1.79	20.6	612.4	6.14	13.6
BAG	3.64	40.7	315.0	2.94	22.7	2.09	64.3	533.3	5.01	13.8	2.36	28.7	679.2	7.65	12.1
33	1.09	7.5	34.4	0.07	178	0.23	1.6	73.0	0.13	116	0.43	12.1	91.4	0.21	79.4
34	7.66	132.0	698.5	1.06	9.5	2.51	6.1	875.5	2.20	9.9	4.13	137.8	1013.5	0.53	7.1
35	1.56	8.8	667.6	0.79	12.9	0.78	3.9	563.6	0.78	15.5	1.33	53.0	822.3	0.53	9.8
36	1.66	21.5	337.1	0.53	23.6	0.24	1.7	569.6	1.05	15.5	0.98	43.5	580.2	0.59	13.6
37	1.34	17.6	250.3	1.66	31.4	0.12	1.2	461.1	1.64	19.2	1.10	11.7	474.5	1.32	17.9
38	1.01	10.7	303.7	1.95	27.4	0.44	3.2	380.6	5.26	22.9	0.91	5.7	474.3	3.40	18.3
39	0.92	4.5	273.2	3.40	31.3	0.27	3.3	447.8	8.33	19.6	0.83	4.9	552.7	7.95	15.8

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX D,CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

DETROIT

	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID
	013	1973	BUIC	LIMI	455	014	1973	CADI	DEVI	472	015	1973	CAPR	SEDA	122
MODE NO.	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG
1	4.52	100.5	670.2	3.29	10.5	3.26	64.9	769.4	4.41	10.1	2.67	26.6	189.6	4.51	37.0
2	4.47	68.8	803.0	2.90	9.6	3.35	50.2	974.8	3.39	8.3	3.07	15.1	317.0	5.61	25.3
3	7.50	157.4	1264.9	2.78	5.8	4.91	92.4	1439.9	4.46	5.5	5.12	35.2	389.3	5.06	19.3
4	2.76	48.5	626.3	2.31	12.5	2.15	20.1	749.6	5.07	11.3	2.36	11.5	159.0	5.47	48.1
5	2.42	25.4	552.5	3.71	14.8	1.68	5.2	623.0	5.36	13.9	1.60	3.5	316.0	7.40	27.2
6	2.18	12.3	561.3	2.51	15.1	1.46	2.0	635.2	3.37	13.8	1.37	1.0	281.2	5.88	30.9
7	2.94	106.0	585.3	3.84	11.7	2.05	56.2	714.6	6.03	11.0	2.10	17.4	289.4	7.75	27.5
8	2.59	55.3	624.3	3.93	12.3	1.97	42.7	702.4	4.51	11.4	1.69	25.4	256.2	6.11	29.4
9	2.23	38.6	584.9	4.88	13.6	2.03	30.4	663.4	5.09	12.4	1.54	8.6	264.2	8.02	31.4
10	2.38	25.7	679.5	4.81	12.2	2.15	19.7	775.1	4.44	10.9	1.62	3.2	257.4	6.87	33.2
11	2.52	76.3	679.0	5.33	11.0	2.59	78.3	790.4	5.57	9.6	2.97	19.3	298.1	8.67	26.3
12	2.92	44.6	841.6	6.46	9.6	2.88	44.7	952.3	5.52	8.6	2.31	6.2	332.2	9.32	25.4
13	2.76	49.5	822.5	7.34	9.8	2.91	92.5	908.6	5.95	8.3	2.64	31.3	355.6	9.50	21.5
14	2.04	26.8	646.3	4.94	12.8	1.86	24.1	706.5	4.30	11.8	1.60	9.4	250.0	6.30	32.9
15	2.56	36.5	720.5	3.30	11.3	2.28	19.1	803.9	2.70	10.6	4.53	12.6	262.3	3.65	29.9
16	2.47	145.6	1546.9	4.39	5.0	4.60	43.7	1744.7	3.89	4.9	11.93	44.4	477.6	4.57	15.2
17	2.93	79.3	708.7	4.89	10.5	2.22	60.6	755.0	4.20	10.4	3.04	14.4	314.8	10.36	25.6
18	2.47	34.4	670.8	2.99	12.1	1.83	19.4	807.6	3.73	10.5	2.20	2.0	300.3	6.56	28.6
19	2.02	65.9	680.9	4.21	11.2	1.87	30.8	688.7	4.49	11.9	3.80	12.2	305.9	8.72	26.3
20	2.81	45.9	795.7	3.18	10.1	2.11	20.4	946.9	4.45	9.0	2.97	2.6	350.5	8.32	24.4
21	4.01	198.9	754.3	3.66	8.2	2.95	149.9	856.5	5.80	8.1	3.29	65.2	317.7	6.52	20.6
22	3.46	90.5	785.3	3.92	9.5	2.70	53.4	859.5	5.00	9.3	2.79	27.1	282.9	5.95	26.5
23	5.00	118.6	1047.3	5.18	7.1	3.76	54.4	1159.1	7.24	7.1	4.78	34.1	367.6	8.74	20.3
24	2.62	54.1	621.1	4.86	12.4	2.02	41.1	689.0	5.16	11.7	1.73	10.4	293.7	8.79	28.1
25	2.06	32.5	624.1	4.15	13.0	1.81	21.7	692.9	4.27	12.1	1.38	3.3	239.1	6.46	35.7
26	3.69	64.0	995.5	4.15	8.0	3.47	22.6	1106.7	4.04	7.7	6.47	13.2	350.3	5.28	22.7
27	3.08	103.0	749.4	5.70	9.6	2.40	71.2	816.7	5.23	9.5	2.32	9.1	314.9	10.96	26.4
28	2.63	22.6	710.0	4.46	11.8	2.12	25.9	684.5	4.58	12.1	1.78	1.1	269.2	7.03	32.1
29	4.24	93.7	982.1	4.15	7.8	3.42	42.5	1073.3	6.43	7.7	3.87	18.7	321.9	7.98	24.4
30	2.64	85.1	643.7	4.09	11.3	2.32	64.7	717.9	4.78	10.7	1.52	6.5	297.5	9.66	28.4
31	2.51	53.3	634.0	3.80	12.2	1.94	33.8	715.0	4.33	11.5	1.29	5.7	251.3	7.18	33.6
32	4.29	83.4	1025.8	4.11	7.6	3.28	38.3	1135.6	4.06	7.4	5.86	25.2	347.9	5.90	21.9
SUM	2.46	51.7	655.7	4.12	11.9	1.78	35.3	741.1	4.46	11.1	1.79	11.1	274.5	6.74	29.8
BAG	2.63	64.0	733.4	4.73	10.5	2.21	51.1	828.5	5.09	9.7	2.22	20.6	290.9	7.07	26.9
33	0.82	28.4	124.5	0.07	51.7	0.46	18.3	140.2	0.09	52.1	0.45	5.7	18.7	0.13	306
34	9.22	315.2	1513.8	0.95	4.4	4.08	186.1	1682.1	0.79	4.5	3.43	70.9	331.6	0.53	19.6
35	4.32	154.2	797.4	0.39	8.4	1.93	96.3	865.2	0.21	8.7	1.49	23.1	238.1	0.27	31.8
36	2.11	73.1	665.9	0.42	11.3	0.72	29.8	785.1	0.51	10.6	2.06	14.5	215.8	0.35	36.2
37	1.46	27.2	431.2	1.28	18.5	0.85	15.4	516.9	1.13	16.3	1.05	3.8	225.0	2.17	37.9
38	1.62	6.8	521.8	1.81	16.5	0.68	4.8	592.0	2.54	14.8	0.63	4.1	278.9	5.31	30.9
39	1.66	18.2	572.5	5.53	14.6	0.86	5.1	660.6	5.97	13.2	0.60	2.5	239.7	7.29	36.2

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX D,CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

DETROIT

	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID
	016	1973	CHEV	STAN	140	017	1973	CHEV	CAMA	250	018	1973	CHEV	CHEV	307
MODE NO.	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG
1	3.80	32.5	309.6	3.90	23.8	3.60	21.3	588.3	5.98	14.0	3.23	55.7	792.4	1.80	10.0
2	4.48	52.3	431.0	4.05	16.8	3.45	14.9	545.8	5.99	15.3	2.88	77.7	725.1	1.08	10.4
3	6.69	78.4	589.6	4.90	12.1	5.60	17.1	874.2	7.88	9.7	4.37	118.8	1158.4	1.20	6.5
4	3.09	41.3	304.4	3.27	23.4	2.49	10.8	465.6	4.55	18.1	1.97	52.5	623.0	1.09	12.5
5	1.86	19.2	319.0	5.21	25.0	2.09	15.3	419.3	5.73	19.7	1.32	39.5	559.5	1.86	14.2
6	1.75	18.6	328.6	3.84	24.4	1.81	9.7	343.3	3.70	24.4	1.02	27.5	523.6	0.91	15.6
7	1.93	34.7	341.1	5.98	22.1	2.63	51.5	476.7	6.72	15.7	5.76	111.6	535.6	1.36	12.2
8	1.78	37.1	343.8	4.79	21.8	2.16	20.2	388.1	5.90	20.8	3.02	73.0	519.3	1.12	13.8
9	1.90	23.1	330.7	6.61	23.8	2.56	24.1	431.6	6.98	18.6	2.00	43.1	573.7	2.11	13.7
10	1.92	17.9	371.0	5.68	21.9	2.42	10.5	405.3	6.20	20.7	1.57	26.9	610.7	1.47	13.5
11	2.04	34.4	377.6	8.11	20.3	3.11	51.7	501.3	7.04	15.0	6.05	114.9	594.3	1.84	11.2
12	2.32	27.8	481.0	7.14	16.7	3.14	21.8	493.9	6.99	16.5	3.34	69.5	792.5	1.92	9.7
13	2.29	40.0	478.5	8.08	16.2	3.15	57.5	554.4	7.46	13.6	2.78	78.2	703.8	3.11	10.6
14	1.62	20.1	333.4	5.80	24.0	2.03	19.6	376.2	5.39	21.5	1.50	38.1	581.1	1.45	13.7
15	2.79	36.5	338.7	4.48	21.9	2.88	11.3	433.2	4.66	19.3	2.77	38.7	692.1	1.02	11.7
16	6.93	117.2	645.5	5.43	10.4	5.92	4.4	944.2	5.23	9.2	5.73	94.2	1514.0	1.59	5.3
17	2.10	45.6	388.3	4.90	19.0	2.41	33.8	486.4	5.59	16.2	3.36	77.7	652.4	2.46	11.3
18	2.02	26.1	364.4	4.82	21.5	2.41	21.4	449.0	4.78	18.1	1.89	51.1	644.6	1.13	12.1
19	2.03	38.8	344.4	4.55	21.5	2.07	25.1	427.3	4.20	18.8	4.39	55.6	638.5	2.17	12.0
20	2.96	43.6	428.4	5.46	17.5	2.79	21.6	528.6	5.20	15.5	4.67	71.0	741.2	1.47	10.2
21	2.47	76.3	418.9	5.90	16.2	4.12	132.8	565.9	4.88	11.3	5.27	151.0	636.4	2.20	10.0
22	2.53	44.0	424.0	6.39	17.7	4.68	46.1	483.6	6.62	15.5	3.00	86.5	699.6	1.32	10.5
23	3.93	67.1	539.2	6.72	13.5	5.19	30.9	696.4	6.91	11.7	5.32	108.0	898.9	1.40	8.2
24	1.68	26.6	369.1	5.80	21.3	2.50	45.9	436.7	5.64	17.2	1.74	54.3	502.4	1.60	13.6
25	1.60	19.6	322.7	5.16	24.8	2.07	15.3	383.0	5.48	21.5	1.36	38.1	559.8	1.08	14.2
26	6.61	119.6	836.0	4.41	13.8	4.21	13.0	616.6	6.12	13.6	4.34	62.9	958.7	2.06	8.3
27	1.98	50.0	428.3	6.10	17.3	2.57	41.1	506.4	6.97	15.3	3.29	99.3	620.1	1.66	11.3
28	2.20	27.8	369.1	5.65	21.1	2.20	15.8	449.1	6.32	16.5	4.46	49.3	687.1	1.19	11.4
29	3.41	56.1	474.1	5.40	15.5	3.57	19.4	626.6	6.15	13.3	3.05	90.4	915.4	1.16	8.3
30	1.67	27.9	397.3	5.90	19.9	2.20	42.3	465.3	6.22	16.5	1.58	62.8	579.2	1.59	13.0
31	1.64	20.8	337.9	5.38	23.6	2.01	21.2	396.7	5.90	20.3	1.58	50.7	610.5	1.23	12.8
32	4.47	57.3	478.5	5.65	15.2	4.64	16.0	612.0	6.34	13.6	3.50	80.7	1029.0	2.94	7.6
SUM	1.86	24.0	361.0	6.14	21.9	2.29	21.6	435.8	6.20	18.6	1.94	49.2	628.6	1.47	12.5
MAG	2.08	38.9	385.6	6.18	19.6	2.59	33.4	464.0	5.90	16.9	2.73	70.3	661.7	1.55	11.4
33	0.37	6.5	54.9	0.11	134	0.53	0.4	88.3	0.17	98.1	0.27	11.2	107.0	0.05	70.7
34	3.84	77.6	646.3	0.68	11.4	5.72	5.7	1059.2	1.07	8.2	3.06	126.9	1310.2	0.53	5.8
35	2.06	34.7	338.4	0.53	22.2	2.00	4.0	634.0	0.53	13.7	1.53	65.9	684.7	0.26	11.2
36	1.96	35.9	297.7	1.16	24.6	1.37	2.7	422.7	0.44	20.6	0.85	36.9	633.8	0.35	12.8
37	1.50	4.2	277.2	4.57	30.8	1.53	2.2	290.6	3.74	29.7	0.40	14.6	489.0	0.52	17.3
38	1.27	1.7	291.0	6.91	29.8	1.52	3.1	328.7	4.41	26.2	0.18	13.6	554.3	0.94	15.4
39	0.94	2.2	320.2	7.97	27.2	1.29	3.4	378.9	9.03	22.9	0.13	13.8	600.0	1.68	14.3

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX D,CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

DETROIT

	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID
	019	1973	CHEV	MONT	350	020	1973	CHEV	CHEV	350	021	1973	CHEV	LAGU	350
MODE NO.	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG
1	2.24	29.4	434.5	1.39	18.2	1.87	73.1	688.2	3.84	11.0	3.03	32.6	727.3	5.47	11.3
2	2.41	37.5	702.5	2.42	11.5	2.09	44.7	760.0	2.53	10.6	2.88	44.3	769.3	2.71	10.5
3	3.56	48.3	997.6	1.89	8.2	3.63	80.9	1260.8	3.11	6.3	4.64	60.7	1270.0	3.43	6.4
4	1.51	23.6	539.0	1.05	15.3	1.63	26.4	613.5	2.66	13.4	1.88	19.1	609.8	2.18	13.7
5	1.22	17.0	476.8	2.41	17.5	1.43	18.4	536.6	4.62	15.6	1.51	13.1	501.1	3.75	16.9
6	1.17	10.4	451.4	2.20	18.8	1.14	12.5	478.6	2.46	17.7	1.22	15.5	464.7	2.57	18.0
7	1.63	34.0	518.0	2.81	15.4	2.28	182.7	526.7	2.96	10.8	2.19	79.0	525.8	3.08	13.5
8	1.48	49.8	515.7	3.30	14.8	1.56	48.7	509.8	3.38	15.0	1.81	61.4	492.5	3.02	14.9
9	1.71	24.9	516.2	3.47	15.8	1.97	117.8	519.9	3.87	12.5	1.78	42.2	498.9	3.94	15.5
10	1.80	26.3	552.9	3.84	14.8	1.55	36.1	586.8	3.66	13.7	1.43	27.4	570.1	3.74	14.4
11	2.04	58.1	552.8	3.52	13.6	2.59	177.8	596.2	3.75	10.0	2.33	85.4	553.0	3.83	12.8
12	2.46	52.3	660.4	4.70	11.8	2.07	56.4	719.5	5.09	10.9	2.11	55.5	697.6	5.31	11.2
13	2.70	76.2	625.3	4.94	11.8	3.00	189.0	688.9	4.48	8.9	2.62	90.4	642.4	5.28	11.2
14	1.63	34.8	509.2	2.96	15.6	1.60	44.3	531.3	3.52	14.6	1.46	38.5	515.4	3.12	15.3
15	2.29	27.6	563.4	1.61	14.5	2.03	38.0	660.2	2.13	12.2	1.63	29.0	607.5	1.95	13.5
16	4.61	50.9	1173.7	1.94	7.0	2.66	88.8	1580.8	3.88	5.1	3.75	56.6	1460.2	3.21	5.7
17	1.69	26.4	516.2	4.44	15.8	2.36	78.6	623.4	4.19	11.8	3.36	91.5	662.6	4.31	10.9
18	1.66	19.1	605.0	2.86	13.9	1.71	35.1	604.6	3.28	13.3	2.59	46.9	556.0	2.48	13.9
19	1.79	69.0	471.7	3.29	15.2	1.97	46.8	624.1	4.81	12.6	1.98	32.7	600.1	4.69	13.5
20	2.68	34.6	689.7	2.40	11.8	1.90	37.3	728.9	3.79	11.2	2.19	39.3	678.3	3.14	11.9
21	2.57	129.2	597.1	3.08	11.0	3.45	212.9	642.3	2.95	9.0	4.77	157.3	611.9	2.82	10.2
22	2.69	69.0	625.2	2.76	12.0	2.39	88.1	691.8	3.95	10.6	4.24	110.0	623.1	3.21	11.0
23	3.82	51.5	793.8	3.70	10.0	3.20	70.7	966.3	5.80	8.2	4.46	79.9	943.8	5.13	8.2
24	1.53	23.8	516.4	4.91	15.9	2.22	89.7	509.9	3.88	13.5	2.24	56.1	544.6	5.16	13.9
25	1.56	26.2	521.5	3.20	15.6	1.63	51.8	525.6	3.75	14.5	1.45	29.6	496.5	3.91	16.2
26	3.96	41.7	824.1	2.64	9.8	2.96	61.1	944.7	3.96	8.5	2.54	46.2	872.4	3.40	9.3
27	1.96	43.6	570.1	5.22	13.8	2.48	107.0	602.3	5.11	11.4	2.55	80.9	626.7	5.21	11.6
28	1.87	24.9	613.1	3.27	13.5	1.69	41.4	634.7	4.04	12.6	1.46	36.0	479.4	2.20	16.4
29	2.90	26.2	771.2	3.92	10.8	2.62	83.9	852.1	6.53	8.9	2.67	40.1	890.9	5.12	9.2
30	1.53	30.3	548.2	5.60	14.8	2.20	90.6	524.3	4.38	13.2	2.67	124.6	553.2	4.23	11.7
31	0.77	32.2	520.9	2.89	15.5	1.66	63.4	541.6	3.47	13.7	1.50	45.1	510.6	3.33	15.1
32	3.78	47.2	807.2	2.46	9.9	3.02	73.0	924.9	3.31	8.5	2.11	46.7	885.2	2.94	9.2
SUM	1.41	28.9	553.9	3.10	14.7	1.63	56.8	573.2	3.64	13.3	1.73	41.6	564.6	3.44	14.0
RAG	2.00	46.1	592.3	3.78	13.2	2.02	85.0	623.4	4.04	11.6	2.11	64.9	601.7	3.44	12.5
33	0.32	3.3	100.4	0.09	83.3	0.44	6.0	134.5	0.07	61.1	0.44	4.0	145.8	0.31	57.8
34	3.52	46.5	1381.1	2.16	6.1	4.30	61.5	1613.6	0.53	5.1	3.93	36.1	1756.6	3.00	4.9
35	0.88	30.9	838.6	0.55	10.0	1.49	29.2	882.1	1.05	9.5	1.12	14.0	916.7	0.97	9.4
36	0.63	22.6	549.9	0.42	15.1	0.90	18.0	558.3	0.58	15.1	0.86	10.4	629.9	0.77	13.7
37	0.66	16.1	416.2	0.51	20.0	1.06	15.0	387.0	0.35	21.4	0.98	13.4	396.2	1.14	21.1
38	0.54	3.3	445.3	1.51	19.6	0.75	8.3	436.9	2.19	19.6	0.68	6.5	451.2	1.70	19.1
39	0.37	3.6	534.6	3.81	16.4	0.53	6.6	497.3	5.30	17.4	0.54	6.9	495.4	4.24	17.5

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX D,CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

DETROIT

	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID
	022	1973	CHEV	MONT	350	023	1973	CHEV	CAPR	400	024	1973	CHRY	NEWY	400
MODE NO.	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG
1	3.04	74.6	526.8	1.80	13.6	0.78	43.8	507.5	6.41	15.3	4.50	98.8	660.5	4.00	10.7
2	3.19	96.8	680.3	1.52	10.5	0.44	75.4	689.9	9.48	11.0	4.56	103.6	864.8	3.05	8.5
3	4.27	119.9	988.3	1.34	7.5	0.37	131.4	1025.9	15.91	7.2	7.93	200.4	1305.4	3.82	5.4
4	2.38	71.2	517.7	1.27	13.9	1.74	37.8	575.0	3.23	13.9	3.52	91.6	666.4	3.09	10.8
5	1.69	43.6	468.9	2.42	16.4	1.19	20.3	525.5	4.01	15.8	2.32	54.2	564.1	3.65	13.5
6	1.22	29.2	464.2	1.55	17.3	1.51	22.6	485.2	2.12	16.9	2.34	43.2	506.5	3.26	15.3
7	1.72	69.9	496.7	1.77	14.5	2.20	80.1	551.0	3.52	13.0	2.66	69.0	577.6	5.88	12.8
8	1.35	67.9	518.9	1.95	14.1	2.26	65.5	585.4	3.21	13.5	2.48	56.0	552.0	4.50	13.7
9	1.63	44.8	492.1	2.51	15.6	2.23	52.0	536.2	3.81	14.2	2.36	47.6	546.5	6.00	14.1
10	1.36	36.8	571.7	2.46	14.0	3.01	46.7	562.4	3.54	13.8	2.90	54.8	589.6	5.03	13.0
11	1.92	97.2	551.3	2.15	12.5	2.89	107.2	605.8	3.34	11.3	2.96	78.7	614.3	7.26	11.9
12	1.80	62.0	705.7	3.09	11.0	4.53	76.4	713.0	4.37	10.5	3.90	75.3	723.1	6.07	10.4
13	2.26	94.2	629.1	2.64	11.3	4.17	142.3	682.9	3.11	9.7	3.33	78.9	706.0	4.00	10.6
14	1.17	47.8	534.9	1.99	14.5	3.15	66.6	535.6	3.14	13.6	2.60	50.3	553.9	4.99	13.8
15	2.44	54.0	846.1	1.09	9.5	4.49	65.1	607.7	1.65	12.3	3.69	80.1	650.1	2.81	11.3
16	6.94	167.8	1214.7	1.69	5.9	7.77	120.9	1333.1	2.20	5.7	9.21	260.3	1256.3	3.40	5.2
17	1.82	73.3	554.5	2.78	13.1	2.32	66.5	586.5	3.60	12.7	3.33	96.6	634.4	5.02	11.1
18	1.37	42.6	565.9	2.59	13.9	3.38	58.4	593.5	2.57	12.8	3.31	72.0	628.2	4.29	11.8
19	1.52	49.6	539.2	2.75	14.3	3.21	58.5	535.4	3.56	13.9	3.05	88.1	569.3	4.46	12.4
20	1.67	49.5	685.5	2.38	11.5	5.23	90.7	685.8	2.85	10.5	3.95	107.2	714.9	4.53	9.9
21	1.91	126.1	604.4	2.09	11.0	4.20	156.9	636.5	2.82	9.9	4.17	142.0	641.8	5.80	10.1
22	1.62	69.1	677.9	2.42	11.2	5.69	108.4	662.8	3.57	10.4	3.90	98.6	682.7	4.80	10.4
23	2.62	77.0	972.3	2.98	8.1	7.27	103.4	949.1	4.84	8.6	5.76	145.6	924.3	4.71	7.6
24	1.37	52.5	504.1	2.74	15.0	2.05	54.1	575.0	4.33	13.3	2.66	68.4	397.3	4.80	17.3
25	1.00	40.4	533.7	2.23	14.8	3.04	50.2	523.8	3.20	14.5	2.70	65.4	402.2	4.05	17.3
26	3.54	70.4	855.3	1.78	9.1	6.99	84.7	841.6	2.71	8.9	5.56	122.3	941.4	3.50	7.7
27	1.85	85.0	617.4	3.26	11.7	2.73	95.5	657.1	3.92	10.9	3.20	92.7	645.9	6.59	11.1
28	1.32	39.4	622.7	2.03	12.9	3.82	69.9	606.2	3.27	12.2	3.64	[illegible]	641.5	5.01	11.5
29	2.57	61.2	743.4	2.75	10.5	4.79	84.3	804.8	4.03	9.3	5.75	157.7	886.0	4.30	7.7
30	1.39	60.3	535.7	2.00	14.0	2.08	79.4	600.0	3.21	12.1	2.67	69.3	631.2	6.62	11.9
31	1.12	53.0	539.2	1.78	14.2	3.40	78.1	541.4	2.91	13.2	2.70	66.2	526.2	3.90	13.9
32	5.13	98.4	1232.5	6.43	6.3	10.66	191.4	723.6	2.46	8.4	5.48	128.0	879.5	3.72	8.1
SUM	1.47	48.7	598.5	2.55	13.1	2.25	53.8	583.4	3.57	13.1	2.92	65.3	589.0	5.05	12.7
RAG	1.86	71.7	595.0	2.19	12.8	3.39	85.0	638.3	3.52	11.3	3.07	83.5	640.5	4.90	11.4
33	0.44	13.5	96.3	0.04	74.7	0.43	13.3	97.1	0.06	74.4	0.79	21.4	135.0	0.22	51.9
34	3.98	145.5	1207.6	0.38	6.1	3.93	111.3	1223.3	0.58	6.3	8.62	238.3	1429.7	1.06	4.8
35	1.42	89.5	1025.3	0.35	7.6	1.38	51.7	807.4	0.40	9.9	4.14	113.9	844.3	0.64	8.6
36	1.14	72.1	724.7	0.28	10.5	0.83	38.5	595.4	0.32	13.5	2.74	67.9	621.1	0.53	12.1
37	1.23	33.2	516.6	1.18	15.5	0.76	19.7	458.0	0.44	18.1	1.55	25.5	479.2	1.45	16.9
38	0.95	12.1	564.4	2.36	15.1	0.67	5.2	456.7	2.51	19.0	1.94	26.5	460.1	5.03	17.5
39	0.74	10.2	577.9	4.06	14.0	0.51	5.7	545.8	5.89	16.0	2.34	39.4	498.7	6.44	15.6

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX D,CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

DETROIT

	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID
	025	1973	DATS	SEDA	146	026	1973	DODG	DART	225	027	1973	DODG	DART	318
MODE NO.	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG
1	9.83	117.6	214.3	1.68	20.6	3.07	67.6	367.9	1.33	18.3	3.87	96.1	412.2	1.90	15.4
2	7.04	120.5	332.6	1.40	16.3	3.19	52.7	466.7	2.40	15.9	3.73	60.7	557.6	2.43	13.3
3	13.74	198.6	444.2	1.12	11.1	4.79	39.2	687.8	2.44	11.6	6.69	148.6	798.9	2.24	8.4
4	4.20	77.9	298.0	1.54	20.5	2.16	16.0	344.4	2.95	23.6	2.57	46.9	491.9	2.32	15.5
5	2.62	51.1	280.5	3.01	24.0	1.90	44.9	308.8	3.46	23.0	1.93	17.4	427.1	4.97	19.3
6	2.93	39.1	251.5	2.74	27.5	1.75	24.5	321.5	2.71	24.3	1.84	11.9	405.9	4.68	20.6
7	2.66	76.7	306.6	3.98	20.4	2.17	75.4	340.2	3.85	19.1	2.10	28.4	482.6	5.70	16.6
8	3.25	52.2	265.5	3.62	24.8	1.71	34.2	387.9	3.33	19.9	1.96	25.6	452.3	5.31	17.8
9	2.77	52.2	280.5	4.05	23.9	1.97	61.3	345.9	3.20	19.8	2.11	20.8	474.0	6.16	17.3
10	3.54	47.6	288.1	3.76	23.7	1.99	28.8	380.9	3.47	20.5	2.73	22.0	473.0	6.63	17.2
11	2.86	97.9	299.0	3.83	19.2	2.51	105.5	376.6	2.75	16.1	2.73	41.0	518.6	6.15	15.0
12	4.18	65.3	344.1	4.58	19.3	2.56	49.6	472.0	4.15	15.9	3.33	36.1	582.9	7.63	13.7
13	3.84	105.5	333.5	4.62	17.4	3.13	120.0	435.2	2.82	14.0	3.32	53.0	567.2	6.57	13.4
14	3.04	52.4	256.1	3.07	25.5	2.15	96.1	358.5	3.08	17.2	2.52	29.0	433.7	5.57	18.2
15	3.89	60.0	299.2	1.71	21.9	2.43	25.1	372.0	2.42	21.2	4.51	33.6	497.8	3.45	15.7
16	11.67	201.8	600.0	2.08	9.3	6.00	42.1	778.8	2.96	10.3	10.22	135.3	963.3	4.16	7.5
17	5.24	102.0	292.7	3.87	18.9	2.72	71.9	334.8	1.36	19.4	3.55	76.6	477.2	3.87	14.6
18	4.24	75.1	287.1	3.23	21.2	2.49	58.4	354.2	2.40	19.6	2.76	36.7	486.9	4.04	16.0
19	3.20	72.3	313.1	3.35	20.3	2.55	99.6	311.6	1.28	18.6	2.97	58.2	449.4	3.61	16.1
20	5.03	99.9	318.3	3.08	18.1	3.06	73.5	432.3	2.43	15.9	3.56	43.8	586.4	4.91	13.3
21	4.91	122.0	320.4	4.85	16.8	2.76	110.3	401.1	4.06	15.2	3.40	84.3	530.0	5.40	13.2
22	10.45	48.5	340.1	5.83	19.7	2.48	58.2	458.2	3.55	15.9	3.54	52.5	534.8	4.93	14.1
23	14.30	117.6	391.8	4.35	14.3	3.49	68.2	531.8	3.63	13.7	6.10	91.8	696.3	5.26	10.3
24	3.61	66.3	264.6	3.82	23.3	2.36	85.1	388.2	2.82	16.8	2.54	30.7	448.9	7.13	17.6
25	3.72	54.4	268.3	3.65	24.3	2.01	45.6	357.1	2.97	20.4	2.55	25.5	421.6	5.74	18.9
26	7.24	93.0	430.2	3.17	14.8	4.21	48.2	542.5	3.45	14.1	6.43	54.7	687.7	5.06	11.2
27	3.95	83.9	308.0	4.80	19.6	2.91	131.1	494.1	2.45	12.5	3.22	55.8	519.1	6.58	14.4
28	4.48	52.6	285.9	3.74	23.2	2.34	41.3	411.7	3.64	18.3	3.66	40.1	503.6	6.06	15.3
29	12.00	104.6	415.8	3.54	14.4	3.32	60.4	489.3	3.45	14.9	5.71	92.4	643.9	4.74	11.0
30	3.23	87.2	285.9	4.09	20.5	2.60	87.9	321.4	2.54	19.0	2.59	37.4	457.7	6.58	16.9
31	3.31	57.3	258.8	3.30	24.7	2.16	51.4	377.1	2.88	19.1	2.55	32.1	446.2	5.71	17.6
32	8.11	115.6	389.9	2.78	14.9	3.90	56.9	577.3	3.36	13.1	6.00	63.4	685.0	5.18	11.0
SUM	4.35	65.2	276.8	3.33	22.6	1.99	44.2	384.7	4.30	19.3	2.73	34.6	475.8	5.70	16.5
BAG	4.32	75.2	303.6	3.89	20.4	2.39	68.3	403.6	3.40	17.1	2.96	42.9	501.8	5.79	15.3
33	2.83	28.3	25.5	0.03	112	0.26	1.3	75.1	0.03	113	0.69	18.3	79.0	0.20	80.8
34	28.33	350.9	528.5	2.70	7.6	3.40	19.0	913.8	0.31	9.3	8.61	236.8	884.9	1.16	6.9
35	6.06	152.9	325.2	0.24	15.2	1.58	6.6	469.4	0.73	18.3	3.45	105.3	556.8	0.53	12.1
36	3.49	70.4	322.7	0.28	20.0	1.20	2.3	348.6	1.00	24.9	1.97	59.4	480.4	0.53	15.5
37	3.19	42.6	223.9	1.06	29.5	1.13	1.3	266.9	3.85	32.6	2.74	9.6	351.5	2.63	23.6
38	3.41	39.6	249.3	3.42	27.5	1.19	1.6	314.5	6.01	27.7	1.28	4.5	400.4	4.95	21.6
39	2.87	34.2	220.3	3.34	31.3	1.14	4.4	379.8	7.95	22.7	1.84	15.8	435.2	8.16	19.1

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX D,CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

DETROIT

	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID
	028	1973	FORD	PINT	122	029	1973	FORD	MAVE	200	030	1973	FORD	MUST	302
MODE NO.	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG
1	3.21	40.1	179.9	1.95	35.1	2.83	62.5	391.6	4.11	17.8	3.15	30.5	545.1	3.48	14.7
2	5.68	53.3	399.2	2.00	17.9	3.66	33.9	615.9	2.93	13.0	3.67	28.2	834.1	4.14	10.0
3	6.51	69.6	494.8	2.01	14.2	6.66	77.6	841.4	4.27	9.0	8.71	76.0	1159.8	4.49	6.8
4	2.59	34.9	286.2	3.01	25.4	2.46	22.2	412.5	3.30	19.5	3.33	31.6	652.2	4.35	12.5
5	1.72	17.8	270.5	4.79	29.2	1.69	9.3	316.6	3.59	26.4	2.41	15.7	580.0	5.39	14.5
6	1.53	10.9	254.1	2.86	32.2	1.76	8.5	316.4	2.27	26.5	2.05	13.8	563.3	3.36	15.0
7	1.68	18.2	241.7	3.96	32.2	1.58	17.4	289.5	3.28	27.6	3.28	45.8	580.0	5.87	13.4
8	2.14	33.4	286.7	3.13	25.7	1.96	35.3	347.5	3.16	21.7	3.17	37.2	572.5	4.73	13.8
9	2.11	17.7	268.9	3.99	29.3	2.27	17.8	304.0	3.52	20.2	3.12	31.0	576.5	6.18	14.0
10	1.92	15.6	440.4	3.99	18.8	2.26	13.3	372.1	3.47	22.2	3.00	23.5	623.9	4.47	13.2
11	2.24	31.6	316.7	5.11	23.8	2.25	32.7	366.8	4.68	20.9	3.33	35.3	620.1	7.78	12.9
12	2.37	25.4	377.4	5.01	20.9	2.83	24.0	484.3	5.05	16.7	3.76	30.5	743.2	6.30	11.1
13	2.72	38.3	372.3	5.17	20.1	3.15	44.2	455.1	6.79	16.6	3.93	40.7	730.2	8.68	11.0
14	1.89	23.6	281.5	3.87	27.3	2.20	18.5	371.8	3.82	21.8	3.06	27.9	576.1	4.76	14.1
15	4.38	36.6	278.2	2.26	25.4	3.61	25.6	380.5	2.41	20.5	3.94	42.1	627.7	2.98	12.6
16	11.40	103.5	530.0	2.72	12.2	7.84	86.7	831.7	2.48	8.9	9.51	137.7	1190.0	3.91	6.2
17	3.17	48.6	296.2	3.50	23.2	2.64	50.4	388.4	4.27	18.6	3.94	66.5	594.8	5.67	12.5
18	2.29	21.4	327.2	2.93	24.1	2.72	27.7	387.9	2.89	20.2	3.46	35.1	693.0	4.53	11.7
19	3.13	30.0	305.0	4.62	24.5	2.30	22.5	344.3	4.26	22.9	3.36	46.9	547.4	4.42	14.0
20	2.80	20.0	391.2	4.53	20.6	3.29	30.1	451.0	3.50	17.4	4.47	55.6	792.8	4.52	9.4
21	2.77	31.5	330.8	4.88	22.8	2.89	58.8	395.5	4.76	17.9	4.46	85.0	650.3	7.30	11.1
22	2.87	34.7	351.7	4.48	21.4	3.50	44.5	440.4	4.23	17.0	4.31	55.2	710.9	5.45	10.9
23	5.06	55.6	419.2	4.45	17.0	5.05	66.2	534.0	5.06	13.6	6.80	101.0	918.5	7.00	8.1
24	1.89	19.1	304.7	5.34	26.1	2.12	21.6	332.3	4.28	25.8	3.17	33.6	587.1	6.34	13.7
25	1.61	15.6	300.4	4.27	26.9	2.09	12.5	351.1	3.68	23.5	2.94	23.3	559.3	4.72	14.7
26	5.55	41.1	426.5	3.78	17.4	5.27	32.8	529.7	3.62	14.8	6.01	63.6	850.5	4.19	9.2
27	2.72	39.8	329.6	4.88	22.1	2.62	37.1	414.0	6.37	18.5	3.69	42.2	648.8	8.15	12.2
28	2.37	20.2	332.2	2.98	23.9	2.65	17.9	414.5	4.32	19.7	3.51	35.7	651.0	4.97	12.4
29	4.24	44.0	403.1	4.10	18.3	2.50	58.2	501.3	5.05	14.8	5.95	96.0	806.2	5.38	9.1
30	1.95	22.1	332.6	2.44	23.8	2.04	23.5	324.9	3.65	24.1	3.52	47.4	581.8	5.56	13.3
31	1.72	22.6	295.0	2.14	26.4	2.23	21.5	378.3	3.90	21.2	3.64	41.7	579.1	4.31	13.5
32	5.31	49.2	415.8	3.38	17.4	5.36	41.2	518.5	3.22	14.8	6.53	82.3	902.3	4.08	8.4
SUM	2.03	22.1	304.5	4.20	25.7	2.09	20.2	376.5	4.06	21.4	3.06	32.1	619.6	4.98	13.1
RAG	2.65	33.6	301.0	4.22	24.5	2.58	31.3	398.6	4.20	19.5	3.63	42.0	656.4	5.69	12.1
33	0.39	5.7	43.3	0.18	165	0.47	12.5	64.7	0.09	103	0.86	12.6	103.4	0.25	70.5
34	3.51	90.4	538.2	0.53	12.8	5.52	156.0	795.0	1.28	8.4	9.56	144.3	1286.8	2.12	5.7
35	2.60	42.3	453.7	0.63	16.8	1.34	10.1	707.2	0.77	12.2	5.05	77.2	699.7	0.84	10.6
36	1.92	36.3	265.0	0.37	27.0	0.78	4.1	496.1	0.82	17.6	1.96	14.3	722.5	1.04	11.8
37	1.58	23.0	232.9	1.23	32.4	1.12	1.7	273.0	1.50	31.8	1.44	11.9	518.1	1.50	16.4
38	0.99	3.5	227.3	3.29	37.6	1.26	2.0	310.2	2.56	28.0	1.34	10.7	529.5	2.70	16.1
39	1.09	5.0	274.4	6.80	31.1	1.26	2.4	345.3	5.73	25.1	2.37	14.1	542.9	5.63	15.5

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX D,CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

DETROIT

	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID
	031	1973	FORD	LTD	351	032	1973	FORD	MUST	351	033	1973	FORD	STAW	400
MODE NO.	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG
1	3.00	20.6	574.9	3.63	14.4	6.20	103.6	506.0	1.90	12.9	6.33	23.0	490.2	4.59	16.2
2	3.35	15.9	774.5	4.54	11.0	5.28	53.1	628.0	1.51	12.2	3.67	16.3	878.7	3.72	9.7
3	4.92	29.3	1147.9	4.58	7.3	10.21	188.1	892.1	1.67	7.3	9.04	25.6	1074.3	4.28	7.8
4	2.27	15.0	621.8	3.90	13.6	3.93	59.2	536.7	2.27	13.8	3.02	18.9	752.7	3.36	11.2
5	1.78	12.0	431.8	4.02	19.4	2.43	19.5	478.9	2.57	17.2	1.69	7.2	647.9	5.07	13.4
6	1.90	9.4	456.6	4.04	18.6	2.34	11.5	431.2	2.25	19.4	2.28	1.8	611.9	2.86	14.3
7	2.33	81.3	555.5	6.15	12.9	3.13	39.3	509.3	4.15	15.3	3.84	68.8	617.2	6.57	12.0
8	2.59	37.2	543.0	3.14	14.6	3.08	24.4	476.2	4.17	16.9	2.67	47.8	697.6	6.93	11.4
9	2.53	24.8	565.4	6.50	14.5	3.17	16.6	504.4	4.18	16.4	2.78	43.5	670.4	7.85	11.9
10	2.64	19.3	589.7	3.62	14.1	3.80	18.6	504.3	4.31	16.3	2.68	17.5	674.6	7.89	12.5
11	3.02	53.3	618.9	7.44	12.5	4.66	40.8	535.6	5.17	14.4	3.82	79.4	686.5	8.51	10.8
12	3.62	27.8	731.4	5.08	11.3	5.48	24.6	638.7	5.42	12.8	2.95	28.9	848.8	8.97	9.8
13	3.74	59.1	698.0	8.13	11.1	5.54	36.3	633.3	6.40	12.5	4.03	62.5	786.0	9.78	9.9
14	3.10	24.8	565.8	3.73	14.4	4.12	18.0	497.8	4.13	16.5	2.26	19.1	640.8	6.31	13.1
15	4.05	28.9	597.7	2.70	13.5	6.19	13.2	547.9	2.22	15.1	4.79	13.5	589.0	3.58	14.2
16	8.27	61.6	1228.9	3.89	6.6	15.36	231.2	972.6	2.85	6.4	9.84	37.6	1042.8	4.98	7.8
17	3.15	36.5	605.8	6.21	13.2	4.51	82.3	445.1	2.90	15.1	3.59	40.5	633.2	7.17	12.5
18	2.63	21.4	586.2	5.00	14.1	3.38	26.5	542.4	2.35	14.9	2.20	21.2	810.8	3.80	10.4
19	2.44	18.8	570.6	6.11	14.6	3.83	65.4	435.3	2.70	16.1	3.66	33.4	585.6	5.75	13.7
20	2.94	20.0	711.0	6.54	11.8	4.15	32.5	632.7	2.61	12.7	3.34	26.9	950.6	3.46	8.8
21	3.68	137.0	619.7	6.45	10.5	3.60	75.6	597.7	5.14	12.2	4.99	128.6	726.5	7.67	9.4
22	4.16	54.1	699.4	3.88	11.1	4.03	33.0	601.7	4.61	13.3	3.40	68.1	754.1	5.64	10.2
23	5.63	50.2	930.4	5.20	8.6	7.29	102.6	717.4	4.95	9.8	6.46	50.5	915.3	6.44	8.7
24	2.36	17.2	571.7	6.49	14.6	2.50	19.3	510.7	3.35	16.2	2.31	15.6	675.3	8.58	12.6
25	2.35	17.0	561.3	4.25	14.9	3.49	14.8	496.7	2.15	16.7	2.35	12.7	660.8	8.30	12.9
26	5.09	37.6	873.9	4.42	9.4	8.92	65.7	703.3	1.89	9.9	5.49	20.9	881.0	6.15	9.5
27	2.67	18.3	653.2	9.57	12.9	3.53	40.8	558.0	4.24	14.0	3.17	52.1	765.6	9.13	10.3
28	2.77	20.6	658.2	4.26	12.7	4.44	25.7	554.0	3.81	14.6	2.72	14.1	720.4	7.68	11.8
29	3.95	33.2	863.3	5.13	9.6	7.28	101.6	651.1	3.86	10.6	5.78	22.3	877.2	6.13	9.5
30	2.25	32.0	595.1	8.39	13.6	2.53	19.3	520.4	4.07	15.9	2.55	28.6	669.1	8.23	12.3
31	2.51	23.4	576.5	4.51	14.3	3.50	14.9	541.0	2.70	15.4	2.56	23.7	714.6	8.41	11.7
32	5.12	41.6	863.6	4.74	9.4	8.49	64.9	792.7	2.46	9.6	6.14	27.9	971.8	6.79	8.6
SUM	2.64	24.8	575.5	4.80	14.3	3.48	33.8	502.2	3.76	15.7	2.64	26.6	677.1	8.12	12.2
HAG	2.89	25.8	658.6	5.64	12.5	4.15	41.3	562.1	3.78	13.9	3.29	41.6	752.7	6.66	10.7
33	0.50	0.7	114.1	0.04	76.0	1.12	30.4	76.0	0.05	69.6	1.33	1.0	67.7	0.03	120
34	5.59	21.2	1591.8	0.95	5.4	14.42	334.5	906.3	0.54	6.0	4.56	9.5	1405.5	0.69	6.2
35	1.35	5.0	823.3	0.71	10.6	7.30	165.8	475.1	0.23	11.7	1.94	4.7	831.5	0.72	10.5
36	1.22	4.3	562.6	0.76	15.5	4.03	93.9	489.6	0.31	13.7	1.43	9.9	673.9	0.87	12.8
37	1.52	5.3	388.9	1.77	22.1	1.60	16.8	414.1	0.69	19.9	0.93	4.2	541.2	2.82	16.1
38	1.92	3.7	406.0	7.23	21.2	1.60	7.8	377.5	2.75	22.5	1.14	3.5	543.7	3.27	16.1
39	2.32	12.5	502.6	3.40	16.8	2.49	13.2	408.0	5.67	20.3	1.37	11.4	628.2	15.94	13.6

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 111.85 CARBON TO HYDROGEN RATIO

APPENDIX D,CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

DETROIT

	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID
	034	1973	FORD	LTD	400	035	1973	MAZD	SEDA	70	036	1973	MERC	MARQ	429
MODE NO.	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG
1	5.45	164.9	579.6	3.58	10.8	5.09	38.3	368.9	1.72	19.9	4.60	98.2	567.2	6.81	12.1
2	4.51	75.2	746.5	3.21	10.1	4.40	40.6	615.3	1.81	12.8	3.60	42.6	934.4	4.53	8.8
3	9.12	246.0	1003.4	4.13	6.3	6.71	52.7	807.7	1.77	9.7	6.72	149.7	1217.2	4.79	6.0
4	3.87	92.1	779.5	3.15	9.5	2.48	21.8	473.5	1.37	17.2	2.82	63.5	623.0	4.15	12.1
5	1.96	23.8	588.8	4.29	14.0	1.36	14.1	392.0	2.22	21.2	1.89	23.2	603.2	5.70	13.7
6	1.95	9.0	532.6	4.11	16.1	1.04	8.7	477.6	2.06	17.9	1.60	12.6	610.0	3.63	14.0
7	2.52	24.5	610.7	7.32	13.4	2.16	25.1	393.8	2.20	20.2	3.11	93.0	547.9	4.31	12.6
8	2.13	28.1	614.7	7.31	13.3	1.77	31.5	433.8	2.11	18.2	2.54	94.0	651.9	3.93	11.0
9	2.45	14.7	612.3	7.80	13.8	1.59	20.4	382.5	2.58	21.2	2.83	45.9	586.3	8.04	13.3
10	2.73	11.4	639.1	8.49	13.3	1.19	13.1	484.1	2.76	17.5	3.17	28.7	684.7	6.24	12.0
11	3.41	69.9	657.6	7.44	11.4	2.86	55.8	421.5	2.18	17.1	5.25	190.1	578.0	5.22	9.9
12	3.57	29.3	793.0	8.83	10.4	2.09	32.0	580.3	2.96	13.9	4.37	95.8	875.9	6.35	8.5
13	3.92	50.6	775.9	8.94	10.2	3.06	51.0	492.8	3.41	15.2	5.54	184.2	740.3	7.16	8.5
14	2.21	14.2	612.4	5.90	13.8	1.53	22.8	430.2	2.57	18.8	3.17	57.9	610.4	4.75	12.5
15	4.70	38.1	620.5	3.49	12.8	1.85	19.4	562.4	1.60	14.8	4.84	62.7	678.2	2.83	11.2
16	11.21	204.5	1100.2	4.15	6.1	5.29	61.2	1305.9	2.25	6.3	10.94	213.3	1211.6	3.37	5.6
17	3.25	76.3	631.8	4.63	11.6	2.02	27.7	476.0	3.03	16.9	4.10	113.6	640.9	6.37	10.7
18	2.48	18.2	662.1	6.25	12.7	1.21	11.8	588.5	2.30	14.5	2.81	44.6	716.5	5.02	11.2
19	2.98	55.2	575.6	4.95	13.2	1.10	13.0	537.1	2.91	15.8	3.30	64.0	618.8	6.92	12.2
20	3.16	23.6	806.4	6.78	10.4	1.05	6.4	722.1	3.00	12.1	3.15	32.6	869.4	6.65	9.5
21	3.47	96.5	747.2	6.74	9.8	3.91	84.2	492.7	2.74	13.9	5.43	258.5	697.6	3.59	7.9
22	3.65	44.0	741.5	4.41	10.8	2.67	41.7	528.8	0.62	14.7	5.12	141.5	753.6	3.96	8.9
23	7.04	121.0	939.1	3.99	7.7	3.19	40.6	739.9	3.03	10.9	7.63	161.7	1001.8	7.12	6.9
24	2.15	12.6	626.3	7.72	13.6	1.49	19.2	460.2	2.58	17.9	2.65	32.5	679.2	10.05	12.0
25	1.87	6.7	596.8	4.37	14.5	1.19	16.6	441.0	2.17	18.8	2.66	23.4	633.3	6.85	13.1
26	6.76	44.2	859.8	4.42	9.3	2.47	29.0	780.7	2.03	10.6	6.69	60.6	1010.8	5.48	7.9
27	2.66	34.9	721.4	7.97	11.3	1.86	27.5	502.7	3.65	16.1	3.69	89.2	749.4	10.14	9.8
28	3.23	16.0	669.0	3.67	12.6	1.22	7.8	501.8	2.63	17.1	3.71	40.8	713.9	6.16	11.2
29	6.29	110.3	864.6	3.82	8.4	2.13	24.6	700.8	2.66	11.9	6.32	112.0	959.4	6.82	7.7
30	2.39	14.6	632.8	8.84	13.4	1.57	17.9	467.6	3.00	17.7	3.39	72.8	684.7	10.56	11.0
31	2.01	9.9	632.8	4.50	13.6	1.39	26.2	451.3	1.74	17.9	2.51	30.5	692.5	6.40	11.9
32	6.47	37.3	880.4	4.56	9.3	2.56	38.9	832.1	1.76	9.8	6.36	78.4	1013.2	5.72	7.7
SUM	2.68	30.8	629.9	7.61	12.9	1.29	17.8	493.4	2.17	16.9	3.07	62.3	655.3	6.40	11.7
MAG	3.06	39.6	686.7	6.00	11.7	1.85	30.3	499.6	2.47	16.0	3.88	93.8	731.9	6.74	10.0
33	0.91	30.7	78.9	0.08	68.3	0.16	2.8	79.6	0.02	105	0.72	16.3	113.7	0.12	62.7
34	11.75	391.0	902.3	0.69	5.7	1.23	8.1	1306.1	0.94	6.7	8.04	206.9	1331.4	1.30	5.3
35	4.53	87.0	851.8	0.77	8.8	0.17	2.4	1099.6	0.52	8.0	3.99	109.1	678.9	0.45	10.3
36	2.95	45.8	600.2	0.72	13.0	0.07	0.7	697.0	0.38	12.7	2.68	72.1	519.4	0.39	13.8
37	1.58	2.7	454.8	4.31	19.1	0.01	1.4	479.7	0.43	18.4	0.78	11.2	520.4	1.32	16.4
38	1.89	2.9	492.5	2.57	17.7	0.11	1.0	486.2	1.62	18.2	1.35	7.4	484.9	4.93	17.7
39	1.77	8.1	573.9	15.41	15.0	0.35	1.4	407.7	2.46	21.6	2.24	21.8	579.9	10.08	14.3

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX D,CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

DETROIT

	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID
	037	1973	OLDS	CUTL	350	038	1973	OLDS	98	455	039	1973	PLYM	FURY	318
MODE NO.	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG
1	3.83	92.9	511.5	3.38	13.3	8.32	20.3	712.5	10.10	11.5	4.10	62.6	533.5	6.48	13.8
2	4.46	68.5	735.8	3.24	10.3	6.10	10.8	749.8	8.64	11.3	4.59	52.0	652.0	6.71	11.9
3	7.33	131.0	1150.2	3.15	6.4	11.90	37.7	1163.7	9.12	7.0	7.74	112.7	1014.2	7.31	7.3
4	3.62	82.1	618.0	2.12	11.7	4.18	9.0	663.4	9.12	12.8	3.26	38.8	582.2	7.14	13.6
5	2.80	37.1	508.7	4.95	15.4	2.18	2.3	597.1	11.08	14.6	2.57	17.9	510.1	11.15	16.2
6	2.72	23.4	466.8	4.31	17.3	1.87	1.3	524.8	7.86	16.7	2.36	10.2	450.8	7.94	18.7
7	3.90	116.5	548.4	5.11	11.9	2.41	34.6	627.0	11.77	12.9	2.61	30.2	540.3	10.99	14.9
8	3.10	43.6	481.1	4.15	15.9	2.01	19.2	633.7	11.87	13.2	2.24	20.9	495.9	9.01	16.6
9	3.43	32.7	541.3	6.68	14.7	2.34	7.8	635.3	14.33	13.6	2.30	14.9	498.2	11.89	16.8
10	3.48	16.8	548.6	5.29	15.1	2.37	4.8	655.6	12.12	13.2	2.64	14.7	507.4	9.99	16.5
11	3.78	68.0	624.8	6.80	11.9	2.93	7.2	727.3	17.34	11.9	2.91	45.2	571.6	9.72	13.6
12	4.43	28.2	682.2	7.31	12.0	2.80	4.9	866.4	17.92	10.1	3.45	31.4	667.3	11.43	12.2
13	3.99	31.8	706.6	9.94	11.5	3.37	9.5	829.5	20.40	10.4	3.44	48.8	673.5	12.14	11.7
14	2.87	14.1	531.5	5.45	15.8	1.99	3.9	637.8	13.20	13.7	2.56	25.3	480.1	8.12	16.8
15	4.37	19.5	585.8	3.43	14.1	5.60	7.2	702.4	8.42	12.1	3.83	37.5	500.5	4.74	15.5
16	9.29	52.7	1276.0	4.18	6.4	13.49	40.3	1321.9	10.60	6.2	8.80	113.2	1025.5	5.49	7.2
17	3.47	35.3	642.3	6.01	12.5	3.32	15.1	631.0	15.54	13.3	3.45	62.2	593.5	8.94	12.6
18	3.41	25.7	616.0	5.52	13.3	2.59	5.8	713.6	11.08	12.1	3.15	28.6	537.1	7.89	15.0
19	3.19	27.1	591.9	6.09	13.8	3.08	10.3	594.3	13.33	14.3	3.28	48.9	531.2	7.99	14.4
20	4.01	26.7	718.7	6.30	11.5	3.32	6.8	835.4	12.62	10.4	3.81	37.9	636.1	8.64	12.5
21	4.45	158.8	648.0	5.86	9.7	3.19	49.2	776.3	16.57	10.3	3.85	105.7	627.2	7.64	11.0
22	4.39	58.5	650.5	5.41	11.7	3.03	19.6	803.3	14.97	10.5	3.60	58.8	587.3	7.81	12.8
23	6.62	65.8	896.5	6.90	8.7	6.57	33.7	1000.7	16.91	8.3	5.38	76.5	780.6	10.92	9.7
24	3.08	25.3	548.7	7.94	14.8	1.91	4.0	628.4	14.74	13.9	2.72	35.9	518.7	10.14	15.2
25	2.78	13.1	533.3	5.54	15.8	1.70	3.0	662.3	13.77	13.2	2.57	29.5	466.0	7.47	17.0
26	6.38	28.3	833.1	4.84	9.9	8.01	9.6	937.8	12.05	9.1	5.61	56.0	706.3	7.76	10.9
27	3.51	40.8	663.3	8.66	12.0	2.88	9.0	756.2	19.95	11.4	3.40	63.8	594.2	9.13	12.6
28	3.75	18.2	605.7	5.11	13.7	2.93	4.9	731.8	13.06	11.9	3.36	37.5	529.7	7.90	14.8
29	6.03	58.5	826.1	6.43	9.5	7.27	22.2	881.8	16.60	9.4	5.03	69.3	716.1	9.18	10.6
30	3.03	25.6	570.2	9.02	14.3	2.22	4.7	643.0	16.84	13.5	2.86	46.3	519.1	9.95	14.8
31	2.81	15.5	566.4	5.22	14.8	1.96	3.6	701.4	13.37	12.4	2.72	36.3	496.1	7.81	15.8
32	6.28	32.6	865.9	4.90	9.5	7.76	10.2	972.7	11.90	8.8	5.66	58.8	736.6	6.70	10.5
SUM	2.97	27.5	580.8	5.62	14.0	2.57	9.1	656.6	12.30	13.1	2.78	31.9	532.5	9.76	15.0
HAG	3.48	39.6	624.7	6.11	12.7	3.00	13.6	747.9	12.77	11.4	3.15	45.2	568.2	8.73	13.7
33	0.56	4.8	118.0	0.22	69.8	1.65	5.6	99.8	0.16	77.9	0.63	14.9	100.8	0.37	70.3
34	6.06	56.3	1362.3	1.38	6.0	22.84	54.8	1211.1	2.32	6.5	6.90	172.4	1118.9	1.76	6.3
35	2.22	15.3	899.5	0.80	9.5	9.24	19.0	770.6	0.84	10.7	2.94	71.5	697.3	0.96	10.8
36	1.38	5.4	670.6	0.78	13.0	4.92	12.9	531.8	0.77	15.6	2.04	41.5	532.4	0.87	14.7
37	1.91	3.7	423.0	2.88	20.4	1.43	3.2	449.3	2.62	19.3	2.13	7.5	392.5	6.83	21.6
38	1.85	3.4	458.8	5.11	18.9	0.96	2.4	495.7	6.93	17.7	1.78	4.3	427.2	10.40	20.2
39	1.60	3.9	512.6	5.77	16.9	0.89	3.3	593.5	13.94	14.8	1.88	11.0	477.5	13.54	17.7

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX D,CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

DETROIT

	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID
	040	1973	PLYM	FURY	360	041	1973	PONT	VENT	350	042	1973	PONT	GRNA	400
MODE NO.	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG
1	9.09	156.7	449.9	1.37	12.2	6.88	121.7	411.8	2.23	14.2	3.97	56.5	597.6	3.67	12.7
2	8.48	216.1	568.0	1.66	9.5	6.17	55.6	800.5	3.45	9.8	3.64	28.7	791.7	1.69	10.5
3	16.75	305.0	837.6	1.95	6.5	11.47	155.8	1045.9	2.67	6.7	7.98	105.2	1122.0	2.11	6.8
4	6.05	122.1	529.8	3.10	12.0	3.83	36.6	715.8	2.18	11.3	2.76	26.6	748.0	2.39	11.1
5	3.49	69.8	488.6	3.59	14.6	2.82	16.0	586.0	4.15	14.3	2.17	11.6	573.5	8.53	14.8
6	3.38	48.0	447.8	4.05	16.6	3.31	12.6	544.2	3.60	15.4	2.92	11.9	486.5	5.09	17.3
7	4.21	69.7	504.6	3.08	14.1	3.85	59.3	583.0	3.89	12.9	4.52	54.4	571.9	8.59	13.2
8	4.02	113.4	499.0	3.34	12.9	3.46	47.7	565.0	5.03	13.6	3.48	33.2	576.0	7.04	13.9
9	4.26	63.8	517.3	3.86	14.1	3.66	29.0	598.4	5.75	13.5	3.73	20.4	572.8	10.67	14.4
10	4.90	76.5	526.5	3.84	13.4	4.00	25.0	650.3	6.04	12.6	4.30	15.5	625.6	8.37	13.4
11	5.78	147.6	546.6	3.48	11.1	4.51	89.7	638.1	3.81	11.2	4.95	73.7	652.8	10.04	11.3
12	5.93	110.0	679.3	5.30	10.2	5.18	60.8	741.1	6.91	10.4	5.31	33.0	774.5	10.15	10.5
13	6.78	144.1	635.0	3.95	10.1	5.80	112.6	691.6	4.65	10.0	5.19	78.0	739.3	7.06	10.1
14	4.47	81.0	493.2	3.80	14.0	3.94	46.9	553.1	4.95	13.9	3.65	30.0	600.2	6.26	13.5
15	9.09	125.9	481.5	2.05	12.5	7.61	59.1	573.6	3.61	12.9	8.59	37.6	577.9	4.08	13.4
16	23.58	348.8	987.2	2.65	5.5	18.58	181.1	1259.7	4.40	5.5	18.69	110.0	1026.7	4.77	7.1
17	5.73	131.3	520.9	2.73	11.9	5.53	96.4	587.3	3.36	11.7	4.69	44.0	581.5	4.43	13.3
18	5.08	88.5	523.3	4.03	13.1	4.76	53.9	620.0	3.28	12.3	4.70	22.6	680.9	5.37	12.1
19	5.70	102.1	546.9	3.71	12.2	5.07	66.3	581.0	2.97	12.7	5.35	38.7	543.5	7.39	14.3
20	6.03	82.9	668.6	4.83	10.9	6.03	77.5	716.0	3.34	10.4	6.82	27.0	738.3	8.01	11.1
21	6.37	164.0	554.8	3.23	10.7	6.02	156.1	619.2	3.40	10.0	5.73	122.2	702.2	5.28	9.7
22	6.34	126.6	618.1	3.79	10.6	5.78	86.2	647.6	4.76	11.1	5.93	56.7	756.8	6.08	10.3
23	11.47	177.2	759.8	4.55	8.3	9.87	140.5	864.7	4.56	7.9	9.79	77.1	928.0	5.68	8.2
24	3.99	72.7	510.7	3.97	13.9	3.94	42.4	557.0	5.00	14.0	2.81	14.2	644.1	9.37	13.1
25	3.72	64.8	523.1	4.09	13.9	3.77	39.0	530.6	4.48	14.7	3.19	12.4	621.5	7.66	13.6
26	11.59	156.5	749.8	3.10	8.6	10.76	89.9	792.6	4.41	9.2	11.91	45.9	822.0	6.72	9.5
27	5.94	132.1	538.8	3.59	11.6	5.58	115.3	591.9	3.71	11.2	4.17	39.9	702.9	7.32	11.4
28	5.97	96.8	562.8	4.05	12.1	5.53	62.8	617.2	4.46	12.1	5.14	22.5	672.1	7.26	12.3
29	11.17	168.7	689.9	4.48	9.0	9.70	137.8	788.3	3.98	8.6	8.51	62.9	829.2	5.50	9.3
30	4.31	89.5	508.0	3.62	13.4	4.09	55.8	559.5	4.34	13.4	2.87	20.4	687.6	9.87	12.9
31	4.53	121.6	530.0	3.05	12.1	4.18	58.9	555.9	4.50	13.4	3.07	17.8	651.7	8.62	12.9
32	12.59	199.2	767.7	2.78	7.9	11.42	111.6	833.0	4.92	8.5	10.92	48.9	854.3	7.78	9.2
SUM	4.81	86.5	533.0	4.50	13.0	4.20	52.6	606.0	4.49	12.6	3.65	27.5	619.9	7.73	13.2
WAG	5.92	122.4	567.6	3.67	11.4	5.18	79.1	632.6	4.44	11.5	4.66	37.3	687.7	7.16	11.7
33	1.61	37.0	63.9	0.04	69.8	1.21	32.6	99.6	0.35	57.4	0.59	7.9	52.8	0.12	132
34	15.73	483.1	896.1	0.42	5.2	10.07	326.6	902.1	0.95	6.1	5.08	43.6	1261.3	1.05	6.6
35	6.16	250.1	605.6	0.34	8.7	3.59	64.4	753.1	0.74	10.3	2.57	29.1	1113.5	1.05	7.6
36	3.96	153.5	519.5	0.33	11.5	0.96	11.8	797.9	1.14	10.8	4.87	15.0	537.9	0.70	15.4
37	3.42	61.3	383.4	1.40	18.1	2.74	10.4	511.8	2.02	16.5	2.34	8.0	442.4	2.72	19.2
38	2.52	5.5	452.1	8.73	18.9	2.24	7.2	534.2	3.37	16.1	1.80	7.4	481.2	5.40	17.6
39	2.73	24.4	529.7	7.27	15.4	2.71	17.4	534.7	6.58	15.6	1.52	4.3	602.0	12.84	14.5

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX D,CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

DETROIT

	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID
	043	1973	TOYO	CELI	120	044	1973	VOLK	SEDA	97	045	1973	VOLK	SEDA	103
MODE NO,	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG
1	4,21	41,5	218,1	3,52	29,9	6,87	86,5	281,3	2,51	20,2	2,19	22,1	285,3	1,18	27,1
2	3,84	72,9	392,7	3,75	17,1	6,48	105,5	464,2	3,93	13,6	2,41	50,0	414,3	1,76	17,7
3	7,63	113,1	546,0	3,01	11,9	9,58	165,0	607,2	3,34	9,9	3,40	41,2	587,2	2,12	13,4
4	3,04	60,5	293,7	2,80	22,3	5,60	78,0	295,3	2,71	20,4	1,80	17,3	309,4	2,72	25,9
5	1,74	33,7	279,7	5,08	26,2	2,62	34,1	290,6	3,74	25,2	1,86	36,1	290,6	2,71	25,1
6	1,39	21,2	271,2	3,68	28,7	2,17	31,9	290,9	3,12	25,5	1,35	27,3	293,5	1,86	26,0
7	1,66	31,1	295,2	7,48	25,4	2,32	29,6	306,8	5,06	24,6	2,38	57,6	315,4	3,27	21,5
8	1,29	17,2	305,8	7,40	26,3	2,21	35,0	285,2	3,95	25,6	1,52	35,1	324,0	3,14	23,1
9	1,27	19,5	291,2	9,21	27,2	2,10	29,2	285,5	4,97	26,3	1,93	43,9	308,8	3,27	23,1
10	1,41	16,2	326,1	8,48	24,9	2,21	33,5	309,6	4,31	24,0	1,58	28,8	346,9	3,25	22,3
11	1,65	31,2	347,7	9,75	22,1	3,45	50,9	317,9	6,12	21,7	2,45	67,5	339,1	3,73	19,6
12	1,62	19,8	398,7	9,95	20,4	3,19	44,1	359,1	5,30	20,2	2,12	41,0	430,7	4,07	17,7
13	2,00	29,7	394,4	12,36	19,8	3,70	52,5	378,8	7,00	18,8	2,70	90,5	405,8	3,66	15,9
14	1,22	14,9	315,3	7,55	25,9	2,29	27,7	273,5	4,13	27,4	1,66	31,4	305,8	3,45	24,6
15	2,16	48,9	381,6	5,40	19,1	4,48	43,6	303,5	2,96	23,0	2,04	20,8	341,7	2,27	23,3
16	5,45	115,6	790,7	6,47	9,0	11,68	159,7	587,4	3,62	10,1	4,32	28,9	694,6	2,60	11,8
17	2,28	37,5	353,5	9,14	21,2	3,93	59,6	335,6	5,81	20,1	2,26	76,6	342,7	2,67	18,9
18	1,66	25,3	353,7	6,60	22,3	2,93	43,2	323,2	3,76	22,2	1,93	31,9	355,3	2,91	21,6
19	1,96	36,2	348,2	7,25	21,6	4,06	53,4	327,4	5,24	20,9	2,09	52,7	345,1	2,98	20,4
20	1,95	30,4	408,9	7,46	19,2	3,61	46,4	381,6	4,81	19,0	2,37	36,5	416,6	3,28	18,4
21	2,24	43,8	346,8	8,20	21,0	3,56	54,9	341,8	5,80	20,2	2,71	96,0	412,7	3,71	15,5
22	1,78	35,1	365,5	7,74	20,8	3,06	44,1	328,5	4,13	21,8	2,26	43,0	404,6	4,18	18,5
23	4,06	68,7	456,9	7,69	15,4	5,38	86,7	443,8	5,87	14,9	2,89	39,4	519,6	4,80	15,0
24	1,49	29,1	312,6	8,80	24,5	2,52	37,1	350,8	6,45	21,3	1,94	58,1	317,5	3,07	21,4
25	1,12	14,4	294,5	6,83	27,7	2,07	31,9	267,4	3,71	27,4	1,65	28,8	317,7	3,43	24,1
26	2,85	76,1	471,8	5,93	14,8	6,38	77,8	406,1	3,78	16,2	2,92	26,7	501,5	3,16	16,1
27	1,76	28,4	353,0	10,61	22,0	3,36	46,7	343,9	6,07	20,7	2,30	74,4	374,2	3,54	17,8
28	1,44	20,1	343,4	7,44	23,4	2,63	37,9	304,0	4,13	23,9	1,95	27,9	370,5	3,94	21,1
29	3,61	62,4	418,0	7,39	16,8	4,89	100,0	408,9	7,22	15,3	2,71	35,5	499,0	4,28	15,8
30	1,51	29,5	343,3	11,35	22,5	2,61	46,8	402,0	7,46	18,3	2,09	65,1	353,1	3,18	19,2
31	1,17	17,6	304,3	6,68	26,5	2,50	59,5	334,0	4,36	20,4	1,66	30,9	307,4	3,52	24,6
32	2,69	67,4	468,2	6,02	15,2	5,86	91,0	478,8	4,42	13,9	2,97	31,0	480,7	3,46	16,5
SUM	1,64	30,0	327,6	7,78	23,4	2,40	32,9	324,0	4,99	23,2	1,59	31,2	341,7	3,41	22,4
BAG	1,77	35,1	350,7	7,82	21,6	3,04	41,8	335,6	4,81	21,6	1,91	45,8	365,6	3,45	20,0
33	0,57	3,7	24,4	0,11	277	0,58	12,7	44,8	0,01	133	0,13	1,6	60,3	0,12	140
34	4,07	8,7	537,5	0,74	15,7	4,53	140,1	634,8	0,53	10,2	1,48	7,4	772,7	0,85	11,2
35	4,58	160,6	487,6	0,82	11,8	2,55	47,2	554,7	0,79	13,9	1,00	4,5	411,2	0,64	21,1
36	2,85	99,9	325,1	0,62	18,1	1,73	36,5	327,4	0,51	22,7	0,90	2,6	290,8	0,76	29,8
37	1,62	51,0	269,4	1,70	25,0	1,11	8,2	278,8	2,39	30,1	0,72	5,8	241,3	1,11	35,1
38	0,99	17,5	322,2	6,79	25,2	1,04	8,6	316,4	5,18	26,6	0,79	4,7	275,8	2,32	31,3
39	0,86	12,1	296,1	10,75	27,9	0,96	4,3	288,1	6,53	29,8	0,79	3,2	324,7	5,34	26,7

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1,85 CARBON TO HYDROGEN RATIO

APPENDIX D,CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

DETROIT

	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID
	046	1972	BUIC	LESA	350	047	1972	BUIC	CENT	455	048	1972	CHEV	VEGA	140
MODE NO.	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG
1	9.49	202.1	446.3	2.56	11.2	4.14	81.1	558.7	7.14	12.7	3.61	64.7	266.3	0.20	23.4
2	8.19	177.1	638.2	3.74	9.4	4.43	40.9	852.2	8.58	9.5	5.40	83.4	618.0	0.47	11.8
3	17.92	376.0	903.5	3.56	5.7	7.13	110.0	1213.1	10.80	6.3	10.62	107.7	768.2	0.50	9.1
4	5.33	151.3	611.4	3.62	10.2	3.53	43.7	681.8	11.39	11.7	4.05	69.4	474.9	0.32	14.9
5	3.06	66.7	542.7	6.79	13.5	2.62	16.0	602.0	13.32	14.0	1.96	53.4	371.5	0.39	19.2
6	3.12	47.2	458.5	4.63	16.4	2.41	14.0	576.1	8.21	14.7	1.60	41.7	409.7	0.46	18.5
7	5.49	104.5	561.3	4.83	11.9	2.75	51.1	625.0	10.33	12.4	2.43	80.0	318.4	0.62	19.6
8	4.50	115.9	513.2	5.47	12.5	2.21	35.0	605.9	8.70	13.3	2.38	74.1	404.5	0.67	16.8
9	5.53	73.0	544.0	6.23	13.1	2.53	18.9	612.2	13.42	13.7	1.37	50.3	343.4	0.67	20.8
10	6.22	74.7	549.8	6.23	12.9	2.61	14.2	669.3	10.22	12.7	1.27	44.5	477.3	0.76	16.1
11	7.09	130.6	620.0	5.17	10.5	2.64	38.2	709.9	13.22	11.4	3.02	105.4	349.6	0.61	16.9
12	8.04	93.2	656.8	7.23	10.7	3.37	24.6	825.0	12.18	10.2	3.02	86.4	563.8	0.84	12.5
13	9.12	157.4	689.8	6.13	9.2	3.40	48.3	787.7	14.86	10.2	4.65	147.8	400.9	0.71	13.7
14	5.64	102.1	496.2	5.26	13.2	2.45	26.8	626.4	8.81	13.1	2.51	57.7	387.6	0.47	18.3
15	17.47	176.4	449.3	2.65	11.4	4.44	40.0	729.4	6.52	11.0	3.78	38.5	479.5	0.39	16.1
16	42.58	554.6	922.3	3.49	4.6	9.93	117.3	1571.3	8.80	5.0	7.82	60.3	1132.6	0.74	7.1
17	10.81	170.4	540.7	4.79	10.5	3.37	66.5	702.2	10.22	10.9	7.21	121.6	364.3	0.58	15.4
18	7.16	112.9	536.0	4.82	12.1	2.82	33.1	682.2	8.62	11.9	4.79	88.6	421.8	0.35	15.4
19	9.31	143.6	521.8	4.64	11.4	2.75	35.3	683.6	10.87	11.9	4.07	81.3	343.1	0.52	18.3
20	9.14	137.6	640.2	5.29	10.0	3.71	32.5	831.7	11.62	9.9	4.83	90.1	500.7	0.41	13.5
21	16.60	364.3	574.1	2.05	7.4	3.43	127.3	751.0	8.43	9.2	8.80	169.3	336.7	0.51	14.1
22	14.82	275.6	575.7	4.75	8.4	3.04	60.7	766.9	9.81	10.2	5.75	130.6	450.7	0.40	13.2
23	25.36	317.9	765.8	5.58	6.6	4.99	77.3	1024.3	14.52	7.6	10.28	156.9	542.8	0.60	10.2
24	6.29	143.6	492.2	4.73	12.0	2.30	25.4	626.3	12.36	13.2	4.03	96.3	372.7	0.54	16.5
25	5.54	107.8	495.2	5.03	13.0	2.09	21.4	613.7	10.42	13.6	2.61	76.9	349.1	0.42	16.8
26	24.95	281.8	665.7	3.84	7.5	5.26	35.1	988.2	10.71	8.4	4.94	61.8	738.7	0.53	10.4
27	10.16	183.9	584.9	4.69	9.8	2.66	39.3	715.8	13.44	11.3	5.46	139.7	356.0	0.54	15.0
28	9.84	130.2	553.9	5.20	11.2	2.61	26.6	731.2	10.70	11.4	3.55	90.2	436.4	0.43	15.1
29	24.52	262.1	701.9	5.11	7.4	4.79	60.8	957.0	15.06	8.3	7.36	140.2	597.8	0.55	10.5
30	6.37	151.1	520.7	3.84	11.3	2.37	28.8	655.6	12.88	12.5	4.08	117.3	365.4	0.65	15.8
31	6.03	165.1	498.8	4.10	11.4	2.08	23.4	653.3	12.55	12.7	2.83	78.6	388.7	0.33	17.0
32	23.91	323.9	656.2	3.56	7.2	5.29	40.8	1050.4	10.44	7.8	7.53	89.1	652.8	0.42	10.9
SUM	7.07	124.0	525.4	5.11	11.9	2.33	30.0	657.4	10.39	12.5	2.50	62.8	410.2	0.76	17.2
BAG	9.96	154.1	585.5	5.37	10.3	2.70	36.6	720.1	10.84	11.3	4.32	105.0	416.8	0.51	14.9
33	3.32	55.7	61.6	0.08	55.6	0.55	20.9	109.8	0.26	61.5	0.39	4.8	55.7	0.02	138
34	42.67	730.6	776.3	0.42	4.3	6.50	200.9	1631.9	4.22	4.5	2.56	62.3	842.2	1.20	9.4
35	12.55	399.7	535.8	0.34	7.4	2.46	58.2	895.2	0.97	8.9	0.24	12.5	937.8	0.49	9.3
36	5.88	257.5	492.4	0.42	9.7	1.47	15.7	695.9	1.79	12.2	0.14	8.4	555.6	0.45	15.7
37	3.84	102.1	313.7	0.62	18.3	1.39	6.2	477.5	4.05	18.1	0.20	10.1	324.4	1.26	26.0
38	2.66	35.3	415.6	3.98	18.5	1.36	6.2	519.8	8.64	16.6	0.11	12.8	328.5	1.11	25.4
39	2.34	20.9	512.3	8.72	16.1	1.18	9.2	564.4	12.52	15.2	0.12	16.8	412.3	1.03	20.2

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX D,CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

DETROIT

	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID
	049	1972	CHEV	NOVA	250	050	1972	CHEV	MALI	307	051	1972	CHEV	STAW	350
MODE NO.	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG
1	1.80	29.6	378.5	1.79	20.6	5.24	25.9	506.3	3.97	15.7	4.52	71.2	938.3	8.54	8.3
2	1.56	15.9	694.1	3.33	12.3	4.19	28.1	718.0	2.61	11.4	4.08	56.5	625.4	3.15	12.2
3	3.01	42.6	938.5	3.35	8.7	7.63	44.3	973.1	3.24	8.3	6.95	81.5	1133.3	4.91	6.9
4	0.99	10.3	554.2	2.23	15.5	3.03	18.5	588.0	2.50	14.2	2.84	36.7	634.3	4.81	12.7
5	0.53	4.9	482.0	2.68	18.1	1.92	12.1	515.0	3.49	16.4	1.96	24.3	556.2	6.99	14.8
6	0.45	3.5	468.5	2.50	18.7	2.08	13.7	430.1	4.57	19.4	2.17	26.2	494.0	6.97	16.4
7	0.87	9.9	468.4	5.07	18.2	3.63	72.3	493.5	3.75	14.3	2.77	93.7	556.0	6.78	12.5
8	0.72	10.4	489.8	4.40	17.5	2.55	34.5	448.5	6.05	17.4	2.30	66.5	563.1	6.39	13.2
9	0.87	6.3	461.2	4.69	18.7	2.81	27.2	471.6	6.14	17.0	2.41	62.6	546.3	8.45	13.6
10	0.87	6.6	527.6	4.38	16.4	2.85	20.0	471.8	6.65	17.3	2.53	45.3	574.7	9.83	13.6
11	1.19	12.3	506.7	6.70	16.8	3.58	70.8	437.5	3.96	15.8	3.14	123.3	611.1	6.34	10.9
12	1.04	7.8	654.6	6.45	13.2	3.68	40.2	585.4	5.98	13.4	3.04	73.5	748.8	9.90	10.2
13	1.95	17.2	583.0	8.94	14.4	4.37	96.0	564.0	4.28	12.2	3.24	106.6	740.9	9.20	9.7
14	0.84	6.2	485.8	4.53	17.8	2.90	37.0	460.3	4.01	16.8	2.20	51.2	535.9	7.27	14.2
15	2.72	23.1	523.2	2.97	15.6	5.49	43.7	480.5	3.40	15.7	3.01	43.6	591.3	5.01	13.3
16	6.30	103.5	1097.7	4.15	6.9	12.05	121.2	1058.2	4.02	6.9	7.86	121.0	1316.7	6.48	5.8
17	1.50	32.7	480.8	4.70	16.5	3.50	52.0	523.8	4.70	14.4	2.72	40.4	657.5	9.21	12.2
18	0.85	11.5	543.9	3.93	15.7	2.86	35.4	576.7	3.61	13.8	2.42	36.6	653.7	7.28	12.3
19	1.19	18.4	479.6	3.97	17.3	3.24	42.6	514.1	3.97	15.0	2.28	32.6	588.9	7.72	13.7
20	1.05	14.0	639.6	4.91	13.3	3.90	44.9	646.5	4.25	12.2	3.41	90.8	752.5	7.18	9.8
21	1.78	48.3	543.5	7.06	14.2	4.69	138.8	523.4	3.09	11.7	3.90	175.1	715.0	6.44	8.9
22	1.57	22.6	601.3	5.67	13.8	3.96	67.6	600.7	4.39	12.3	2.99	86.3	685.7	6.79	10.7
23	3.56	63.4	712.5	6.17	10.8	6.46	76.8	735.5	5.14	10.1	4.08	70.3	991.4	10.66	8.0
24	0.88	11.5	478.4	5.69	17.8	2.34	26.4	481.0	5.28	16.7	2.24	54.1	615.1	9.05	12.5
25	0.68	5.6	492.2	4.45	17.6	2.42	21.4	480.0	6.03	17.0	2.16	40.5	546.6	9.16	14.4
26	3.90	36.8	761.8	4.30	10.7	7.26	59.0	711.2	5.31	10.7	4.31	52.9	849.0	8.01	9.4
27	1.34	21.2	523.7	7.13	15.8	3.62	83.6	517.8	4.26	13.4	3.36	130.3	679.9	7.83	9.9
28	1.35	13.4	557.5	5.10	15.2	3.63	40.1	521.6	5.70	14.9	2.74	56.5	622.5	8.78	12.3
29	3.49	68.7	643.0	5.19	11.6	6.02	78.2	641.5	4.68	11.3	3.98	55.5	894.3	10.07	8.9
30	0.97	14.1	487.7	7.03	17.3	2.76	59.2	478.0	4.24	15.3	2.85	110.8	532.1	5.84	12.4
31	0.63	6.8	495.7	4.77	17.5	2.62	40.0	468.6	5.83	16.4	2.48	68.9	552.4	8.39	13.3
32	4.32	42.5	731.7	4.68	10.9	7.70	96.5	675.2	5.12	10.4	4.62	119.7	854.4	8.12	8.4
SUM	0.87	12.7	509.9	4.42	16.7	2.74	34.1	490.1	5.08	16.1	2.29	49.2	598.0	8.91	13.0
BAG	1.17	15.5	557.7	5.19	15.2	3.34	48.0	537.1	4.80	14.2	2.43	70.2	668.7	7.86	11.3
33	0.45	12.5	63.8	0.11	104	0.42	4.2	71.5	0.11	111	0.39	5.9	139.0	0.44	59.4
34	4.65	88.0	958.6	2.22	8.0	6.24	33.6	902.4	0.48	9.1	5.95	51.3	1627.4	3.59	5.1
35	1.35	15.6	591.1	0.69	14.3	1.96	13.4	875.8	0.79	9.8	2.15	17.8	844.5	1.11	10.1
36	0.29	2.9	611.5	0.95	14.4	1.40	8.5	607.1	0.71	14.2	1.57	18.0	547.0	0.76	15.3
37	0.17	2.0	418.6	1.37	21.0	1.34	3.4	367.9	1.92	23.5	1.24	3.8	385.0	3.59	22.5
38	0.10	1.7	420.5	2.37	21.0	1.57	8.2	396.0	4.47	21.5	1.61	14.7	439.0	8.58	19.0
39	0.06	1.5	457.8	4.32	19.3	1.51	5.3	427.4	8.42	20.1	1.16	4.7	546.1	15.36	15.9

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX D,CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

DETROIT

	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID
	052	1972	CHEV	IMPA	350	053	1972	CHEV	STAW	350	054	1972	CHEV	CAPR	400
MODE NO.	**HC**	**CO**	**CO2**	**NOX**	**MPG**	**HC**	**CO**	**CO2**	**NOX**	**MPG**	**HC**	**CO**	**CO2**	**NOX**	**MPG**
1	4.65	59.0	698.7	5.86	11.0	3.27	86.5	345.0	3.35	18.1	4.22	72.8	592.1	5.15	12.3
2	4.16	38.5	782.7	3.99	10.4	2.78	32.0	614.1	6.04	13.2	3.04	52.5	775.5	3.88	10.2
3	5.98	47.2	1110.7	4.12	7.4	7.48	146.6	783.5	4.90	8.6	5.82	69.6	1182.3	4.01	6.8
4	2.64	16.7	636.0	3.41	13.2	2.86	45.5	515.8	5.68	14.9	2.29	36.7	650.0	3.69	12.4
5	1.04	6.7	572.1	4.98	14.9	1.48	7.8	498.2	6.77	17.2	1.68	14.2	579.6	6.34	14.6
6	4.07	11.6	514.6	4.98	16.3	1.24	2.8	443.1	5.22	19.7	1.50	13.7	511.3	5.88	16.5
7	1.96	28.7	552.6	4.80	14.7	2.37	38.7	555.1	7.87	14.2	2.99	54.0	596.5	6.98	12.8
8	1.98	63.9	588.5	3.94	12.8	1.64	19.6	489.8	7.12	16.9	2.44	64.0	537.8	7.58	13.7
9	2.82	38.3	535.0	6.30	14.7	2.23	18.9	522.1	8.40	15.9	2.54	33.6	578.5	9.62	13.9
10	2.56	37.3	582.9	5.89	13.7	2.07	9.9	516.0	7.33	16.5	2.57	36.0	591.9	8.61	13.5
11	2.46	42.2	612.4	7.48	12.9	2.87	34.4	611.8	9.98	13.1	3.26	61.3	635.9	8.36	12.0
12	2.61	50.8	758.8	6.80	10.5	2.68	17.0	626.5	9.59	13.4	3.13	63.4	765.5	9.08	10.1
13	2.60	53.7	725.0	8.25	10.9	3.42	36.3	652.0	12.43	12.3	3.73	75.7	647.2	9.33	11.4
14	1.88	40.9	575.1	5.12	13.8	1.70	8.5	499.2	7.52	17.1	2.39	51.0	493.9	7.20	15.3
15	2.52	32.4	595.6	3.74	13.6	4.94	34.7	490.5	4.52	15.8	3.26	55.0	609.3	4.57	12.6
16	6.73	117.5	1142.4	4.79	6.6	12.52	159.7	959.2	5.18	7.1	2.66	169.0	1283.0	5.32	5.7
17	2.14	50.5	599.3	6.59	12.9	3.36	49.0	549.7	8.75	13.9	3.46	71.1	636.3	7.50	11.7
18	1.94	32.7	653.0	4.77	12.5	1.83	11.0	521.7	6.85	16.3	2.38	43.3	623.1	4.77	12.7
19	1.96	36.2	596.9	5.81	13.4	2.99	34.4	570.8	8.14	14.0	2.93	54.5	618.9	6.56	12.4
20	2.46	40.9	789.6	5.22	10.3	2.67	9.1	609.4	8.03	14.0	3.94	63.4	709.2	4.80	10.8
21	3.20	125.1	673.4	4.12	10.1	3.60	87.9	599.4	8.70	11.9	4.90	120.8	651.5	5.98	10.4
22	2.91	92.7	712.0	4.56	10.2	2.88	38.3	593.6	8.03	13.4	3.59	108.6	685.5	5.17	10.2
23	3.73	86.8	927.4	6.21	8.3	6.52	89.9	752.2	10.48	9.7	5.06	131.8	880.4	6.42	8.0
24	1.99	39.9	590.8	5.76	13.4	1.73	8.8	535.8	9.82	16.0	2.54	45.6	572.1	7.37	13.6
25	2.07	44.4	562.9	6.02	13.9	1.36	4.8	498.1	7.61	17.4	2.45	49.7	549.6	6.34	14.0
26	3.97	59.8	831.9	5.24	9.5	5.35	28.3	733.2	6.93	11.2	4.98	86.6	824.4	6.46	9.1
27	2.50	59.4	668.3	8.23	11.5	2.57	25.1	595.8	11.67	13.8	3.44	78.9	672.4	6.76	11.0
28	2.28	40.0	652.3	5.72	12.3	2.70	8.6	559.9	8.33	15.3	3.20	68.4	596.1	6.52	12.4
29	3.24	71.0	864.0	7.23	9.0	6.51	74.8	709.2	10.69	10.5	4.71	106.7	789.3	5.54	9.1
30	2.36	45.2	613.0	6.09	12.8	1.82	7.5	596.3	11.30	14.5	2.80	57.5	517.9	6.50	14.4
31	2.39	72.1	587.3	5.99	12.5	1.60	4.6	478.0	7.99	18.1	2.85	71.3	493.5	7.24	14.4
32	4.44	95.4	887.4	5.54	8.4	5.48	30.1	674.8	7.50	12.0	5.18	102.4	837.9	6.45	8.7
SUM	2.13	33.7	594.1	5.63	13.6	2.03	23.2	531.4	7.65	15.5	2.52	43.7	582.9	7.14	13.5
MAG	2.52	58.5	650.3	5.40	11.8	2.77	30.4	566.2	8.19	14.3	2.83	68.1	628.8	6.64	11.9
33	0.60	7.7	93.1	0.11	82.9	0.74	24.2	59.5	0.18	88.9	0.62	13.6	88.3	0.12	79.5
34	6.57	114.9	1110.6	0.88	6.8	9.90	274.4	683.1	0.84	7.7	7.10	135.6	1092.0	1.27	6.7
35	2.24	25.2	916.8	1.05	9.2	4.81	121.1	654.5	0.66	10.3	1.81	20.3	938.5	0.98	9.1
36	1.67	15.2	599.6	0.80	14.1	3.02	74.8	453.8	0.46	15.3	1.49	16.4	579.1	0.69	14.6
37	1.44	2.6	395.9	2.42	21.9	0.86	3.7	422.5	2.52	20.6	1.12	2.4	410.0	2.38	21.3
38	1.79	10.9	434.8	4.93	19.4	0.69	3.4	457.0	5.62	19.1	0.93	3.4	446.8	5.42	19.5
39	0.89	5.2	538.9	7.21	16.1	0.75	5.6	485.9	8.73	17.9	1.74	14.5	542.3	11.31	15.6

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX D.CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

DETROIT

	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID
	055	1972	DATS	SEDA	97	056	1972	DODG	DART	318	057	1972	DODG	POLA	360
MODE NO.	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG
1	5.23	79.5	154.0	2.23	30.0	4.14	72.1	390.1	4.81	17.2	4.39	83.5	565.4	5.19	12.5
2	3.77	49.7	346.3	3.32	20.3	3.61	32.1	619.9	5.03	13.0	4.30	67.1	591.5	4.47	12.5
3	8.64	102.3	429.1	2.45	14.4	6.75	93.8	516.9	5.14	12.9	7.54	143.6	926.2	4.68	7.5
4	2.72	46.0	304.1	2.80	23.0	2.79	29.7	507.4	4.82	15.8	3.44	65.9	562.2	5.63	13.1
5	1.60	11.3	307.3	5.24	26.9	1.89	14.2	454.9	6.71	18.4	2.56	32.3	501.2	6.95	15.8
6	1.45	5.2	270.6	5.56	31.5	1.92	15.1	474.7	5.37	17.6	2.38	22.2	437.4	5.40	18.5
7	2.56	35.9	337.1	5.94	22.1	2.51	22.1	496.5	7.28	16.5	3.26	79.8	536.3	6.29	13.2
8	2.40	22.2	299.9	5.74	25.9	2.07	17.8	419.0	5.58	19.6	2.82	54.4	486.8	6.26	15.3
9	2.19	18.6	317.2	7.25	25.1	2.38	18.0	423.7	6.73	19.3	2.94	32.7	552.1	8.99	14.5
10	1.83	12.5	304.9	7.46	26.9	2.51	15.6	440.4	5.83	18.8	3.16	29.1	530.7	7.80	15.1
11	2.49	70.2	336.2	4.71	19.5	2.73	26.5	490.4	8.19	16.4	3.18	46.4	637.9	10.44	12.3
12	2.21	30.6	369.8	1.91	20.9	2.97	19.8	549.6	7.92	15.0	3.71	36.8	713.8	10.22	11.3
13	3.08	63.1	361.3	7.03	18.9	3.36	31.6	560.3	9.95	14.3	3.96	41.9	691.3	11.32	11.5
14	1.70	22.1	279.9	6.02	27.7	2.20	13.2	408.1	5.65	20.4	2.75	26.5	516.7	7.29	15.7
15	3.08	34.6	274.5	3.65	26.2	4.67	24.3	492.5	3.93	16.3	4.90	53.1	504.9	4.13	14.7
16	8.95	108.3	470.8	3.75	13.3	10.37	70.5	1018.4	5.45	7.6	10.62	186.5	990.4	5.05	6.7
17	3.34	70.3	280.0	4.27	22.1	3.13	38.5	496.9	7.38	15.6	3.47	63.6	482.9	6.58	14.9
18	2.11	26.5	312.8	5.57	24.6	2.60	19.7	538.7	6.46	15.4	3.24	44.6	568.8	6.37	13.7
19	3.00	32.1	307.8	6.59	24.1	3.20	30.0	499.2	6.62	15.9	3.49	65.0	465.1	6.43	15.3
20	2.61	17.2	373.6	7.14	21.7	3.65	25.0	630.4	7.36	13.0	4.07	53.7	668.2	7.13	11.6
21	3.96	79.4	378.9	6.38	17.2	3.43	58.4	564.4	7.72	13.3	3.70	93.0	622.6	8.12	11.4
22	3.24	37.9	354.9	6.81	20.9	3.32	36.0	507.9	6.15	15.4	3.90	53.2	639.2	8.09	12.1
23	5.91	86.6	434.5	6.44	15.1	5.96	72.1	689.4	9.14	10.8	6.60	97.9	789.4	9.57	9.2
24	1.73	16.6	324.4	6.77	24.9	2.26	20.0	470.3	8.36	17.4	2.76	39.6	521.1	8.37	15.0
25	1.40	9.0	301.5	6.46	27.7	2.11	14.2	413.4	5.78	20.1	2.65	29.3	521.5	7.23	15.4
26	3.77	35.8	414.2	6.12	18.4	6.23	27.6	702.4	6.07	11.6	7.04	75.2	731.6	6.11	10.2
27	2.53	42.9	351.5	8.62	20.8	2.98	31.0	514.1	9.37	15.5	3.32	56.4	577.2	9.02	13.1
28	1.80	17.3	320.0	7.08	25.2	2.99	19.4	469.4	6.33	17.4	3.93	42.0	561.2	7.35	13.9
29	4.27	63.8	412.9	6.82	16.9	5.33	51.7	599.9	8.39	12.7	6.35	91.4	656.5	7.22	10.8
30	1.79	27.2	348.4	7.51	22.4	2.37	19.7	488.7	9.33	16.8	2.79	45.8	509.1	7.87	15.0
31	1.46	17.8	295.5	5.62	27.1	2.26	16.4	361.9	5.90	22.5	2.74	37.1	551.2	7.80	14.4
32	3.52	37.4	407.8	4.98	18.6	5.70	34.3	721.5	6.23	11.2	6.97	84.3	750.2	6.27	9.8
SUM	1.99	24.6	319.8	5.98	24.3	2.21	20.0	476.3	6.27	17.2	3.05	44.3	544.9	7.20	14.2
HAG	2.38	33.4	334.7	6.41	22.5	2.92	27.7	506.5	6.91	15.9	3.46	54.4	589.9	7.39	12.9
33	0.85	14.9	24.9	0.05	173	0.40	10.4	74.3	0.01	96.6	0.62	14.4	79.2	0.28	85.5
34	7.49	202.3	429.6	0.95	11.5	5.96	120.1	1049.3	2.43	7.1	4.92	158.4	1103.0	0.79	6.5
35	3.02	83.0	311.3	0.40	19.7	1.14	12.7	835.8	0.40	10.3	3.51	129.5	684.9	0.47	9.9
36	1.61	18.8	304.3	0.90	26.2	1.29	11.5	633.8	1.11	13.5	2.73	101.0	489.8	0.35	13.5
37	1.09	2.2	278.7	3.33	31.1	0.76	4.2	431.0	2.03	20.2	2.14	26.1	416.8	2.46	19.1
38	0.98	1.8	282.0	6.27	30.8	1.01	5.8	371.5	4.18	23.1	2.40	30.6	513.6	6.67	15.6
39	0.75	2.0	309.1	7.19	28.2	1.15	7.6	407.3	7.23	21.0	2.08	23.8	481.4	8.44	16.9

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX D,CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

DETROIT

	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID
	058	1972	FORD	PINT	122	059	1972	FORD	TORI	302	060	1972	FORD	LTD	351
MODE NO.	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG
1	3.06	33.4	269.5	2.40	26.8	3.10	14.6	477.9	5.35	17.4	28.44	138.9	533.8	3.60	10.5
2	2.98	26.4	448.2	2.00	17.8	2.85	15.8	753.5	4.23	11.3	33.54	165.1	620.3	2.31	9.0
3	5.39	51.7	583.6	2.57	13.0	4.81	29.1	1086.7	4.45	7.7	59.62	294.5	982.9	2.47	5.4
4	1.89	17.3	355.3	2.71	22.8	2.17	11.4	581.8	4.06	14.6	29.65	156.5	574.4	1.85	9.7
5	0.91	7.4	394.6	3.51	21.7	1.71	7.7	512.2	6.26	16.8	22.68	116.8	448.6	2.02	12.6
6	0.78	6.3	377.4	2.23	22.8	1.93	12.2	468.7	5.03	18.0	22.16	122.5	410.0	1.84	13.2
7	1.28	10.5	331.4	4.67	25.2	2.56	38.6	518.1	6.38	15.1	26.46	149.8	462.7	2.44	11.3
8	1.09	13.5	319.9	3.04	25.8	2.53	31.6	477.3	4.93	16.6	25.75	160.9	441.2	2.15	11.4
9	1.15	15.9	297.5	3.56	27.2	2.47	20.7	511.0	7.25	16.1	25.55	130.6	431.1	2.97	12.4
10	1.01	9.2	325.9	2.65	25.8	2.47	15.5	541.2	5.93	15.5	30.21	159.3	470.7	2.41	10.9
11	1.78	31.9	333.5	4.77	22.8	2.59	15.3	562.7	9.51	14.9	32.35	180.5	472.3	2.57	10.3
12	1.59	20.6	394.8	3.73	20.5	3.12	20.1	642.4	7.15	13.0	39.02	211.9	592.3	2.76	8.5
13	2.06	41.6	373.3	5.42	19.9	3.29	24.8	618.1	10.24	13.3	39.22	225.1	572.3	3.10	8.4
14	1.09	15.8	303.6	2.67	26.7	2.19	16.2	506.4	5.59	16.5	31.13	169.5	440.5	2.06	11.0
15	2.80	16.1	339.4	1.92	23.8	2.73	16.0	622.7	3.39	13.5	41.18	171.8	464.5	1.31	10.3
16	6.56	46.2	658.1	2.59	11.8	6.50	37.2	1232.9	4.79	6.8	94.42	356.5	989.9	1.95	4.8
17	1.99	32.8	350.6	4.21	21.7	2.79	20.8	554.0	8.47	14.9	34.41	189.4	495.3	2.57	9.8
18	1.21	12.8	389.0	2.84	21.5	2.47	16.1	563.0	5.47	14.9	32.35	173.2	495.9	2.01	10.2
19	1.44	14.4	361.1	3.70	22.9	2.41	13.9	507.1	7.25	16.5	33.06	150.1	508.2	3.15	10.5
20	1.35	13.5	451.5	3.27	18.6	2.92	13.9	674.1	6.93	12.6	38.60	193.4	584.7	2.83	8.8
21	2.03	35.5	372.3	6.69	20.4	3.51	87.0	581.1	6.24	12.2	37.28	239.8	554.5	2.87	8.5
22	1.74	22.6	372.4	3.70	21.5	3.22	39.5	655.8	5.35	12.2	40.90	233.0	579.5	2.46	8.3
23	3.08	41.7	469.8	5.48	16.3	4.73	31.5	829.5	7.40	9.9	58.89	272.8	756.3	3.50	6.5
24	1.02	16.4	322.3	3.94	25.3	2.30	10.3	510.5	8.93	16.6	27.80	141.5	436.4	2.27	11.9
25	0.75	12.5	305.2	2.57	27.1	2.22	11.8	502.4	6.67	16.8	30.10	168.1	448.6	2.17	11.0
26	3.80	21.7	498.8	2.59	16.3	4.23	17.3	878.7	5.80	9.7	60.02	253.4	899.2	2.16	6.9
27	1.82	39.4	515.6	4.87	15.2	2.78	20.4	584.7	9.73	14.2	33.33	162.9	567.1	3.79	9.6
28	1.13	18.6	313.6	2.56	25.6	2.72	16.5	601.3	6.39	14.0	36.95	168.1	530.0	3.00	9.7
29	2.14	37.8	418.6	4.56	18.3	4.18	21.6	778.5	6.93	10.7	53.82	231.2	702.6	2.86	7.2
30	0.89	20.6	336.4	4.53	23.9	2.37	11.0	518.6	10.03	16.3	28.22	137.7	446.6	2.71	11.8
31	0.79	15.0	318.8	2.88	25.7	2.46	12.0	534.6	7.39	15.8	31.84	186.2	497.7	2.39	10.0
32	3.11	25.2	486.3	2.83	16.6	4.83	20.1	898.9	6.82	9.4	62.50	281.3	725.9	2.48	6.5
SUM	0.98	15.0	354.9	3.11	23.3	2.47	16.3	539.9	7.26	15.5	29.58	153.9	477.5	2.32	10.9
HAG	1.40	20.9	358.1	3.40	22.4	2.66	21.9	588.8	7.70	14.1	34.19	183.5	520.5	2.60	9.6
33	0.25	6.0	54.5	0.09	137	0.43	0.8	107.9	0.28	80.3	4.16	19.7	83.6	0.07	69.4
34	2.49	70.1	593.2	0.53	12.5	4.24	5.7	1249.7	1.63	7.0	46.55	245.2	1003.5	0.76	5.8
35	0.32	6.2	725.6	0.50	12.1	2.06	4.2	657.5	0.76	13.2	27.53	153.3	572.5	0.43	9.9
36	0.17	3.8	446.2	0.33	19.6	1.17	3.0	529.4	0.76	16.5	27.06	118.2	597.3	0.60	10.2
37	0.09	2.3	345.9	0.60	25.4	1.42	2.4	392.3	2.46	22.2	18.64	82.0	352.3	0.75	16.4
38	0.16	3.6	286.6	1.50	30.3	2.01	4.8	423.9	7.85	20.3	21.07	113.6	346.2	1.51	15.0
39	0.12	2.1	307.4	3.32	28.5	2.22	12.0	475.1	10.17	17.7	23.37	126.1	405.7	2.66	13.1

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX D,CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

DETROIT

	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID
	061	1972	FORD	GALA	351	062	1972	FORD	STAW	400	063	1972	FORD	THUN	429
MODE NO.	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG
1	4.99	104.2	461.0	2.65	13.9	4.22	67.1	640.0	1.06	11.7	3.92	30.1	457.2	5.43	17.2
2	5.49	85.4	682.1	3.17	10.6	4.01	48.9	787.4	6.98	10.1	4.45	43.0	801.8	8.28	10.0
3	8.42	198.8	982.4	3.09	6.7	6.26	103.7	1160.3	5.44	6.6	6.33	37.9	1101.3	9.62	7.5
4	3.39	83.4	603.3	2.16	11.9	2.93	41.8	598.7	2.78	13.2	2.92	14.9	600.8	7.45	14.0
5	2.28	49.6	462.4	4.16	16.2	1.98	17.3	557.0	4.45	15.0	2.35	17.6	540.2	9.61	15.4
6	2.41	38.9	430.6	3.80	17.8	1.94	14.7	547.9	7.89	15.4	2.13	12.9	526.0	7.18	16.0
7	2.69	89.5	328.4	5.01	18.6	2.24	61.0	596.6	3.99	12.7	3.65	63.9	523.4	6.40	14.0
8	2.84	62.4	510.0	5.91	14.4	2.47	45.6	610.0	8.38	12.9	2.69	73.3	532.9	8.18	13.5
9	3.24	47.9	47 .3	7.88	15.9	2.57	31.2	604.8	5.64	13.4	3.18	46.9	523.6	9.74	14.6
10	3.71	50.0	544.8	6.54	14.0	2.98	29.6	651.7	10.48	12.5	3.22	41.5	610.7	10.86	12.9
11	3.24	59.3	580.3	9.74	13.0	2.60	40.7	681.0	4.90	11.8	4.69	136.3	523.5	5.07	11.8
12	4.58	70.7	669.1	8.41	11.2	3.48	36.2	816.5	12.85	10.0	4.72	94.2	733.6	12.33	9.9
13	4.30	80.7	577.9	8.97	12.4	3.25	51.2	762.2	6.60	10.4	5.17	143.3	628.4	7.40	10.2
14	3.28	54.3	522.8	5.36	14.3	2.44	26.4	607.7	8.89	13.5	3.46	69.9	562.6	9.13	13.0
15	5.60	74.0	563.8	3.36	12.7	3.84	41.1	656.1	3.47	12.1	5.39	52.1	647.3	6.73	11.9
16	11.95	200.6	1177.6	4.49	5.8	8.58	129.2	1363.1	7.48	5.6	11.48	85.3	1354.3	9.89	5.8
17	3.74	94.4	485.7	4.51	13.7	2.88	63.3	583.5	3.35	12.8	3.66	54.4	578.5	9.03	13.1
18	3.43	69.5	523.0	4.14	13.8	2.54	34.7	639.6	8.72	12.6	3.37	36.3	628.2	9.40	12.8
19	3.24	73.6	445.4	4.67	15.5	2.55	52.8	575.2	3.55	13.3	3.81	66.3	536.4	5.56	13.6
20	4.35	82.4	616.6	5.45	11.7	2.91	36.3	759.4	9.83	10.7	4.54	76.9	721.3	8.40	10.4
21	3.78	110.4	577.8	7.31	11.6	2.88	97.3	771.8	4.15	9.5	4.64	159.0	546.5	5.23	10.9
22	4.29	79.4	608.0	6.33	11.9	3.63	60.1	756.5	9.16	10.3	4.34	107.1	712.1	11.51	9.9
23	7.25	136.7	766.0	5.08	8.8	5.70	101.5	916.8	6.02	8.1	6.58	69.0	883.4	14.30	8.8
24	2.74	57.4	480.2	5.97	15.3	2.08	27.5	591.3	4.94	13.8	2.94	50.8	542.1	9.35	14.1
25	2.98	54.8	479.0	5.24	15.4	2.13	23.3	622.8	9.94	13.3	2.84	45.3	591.4	10.65	13.2
26	7.57	104.7	752.5	4.62	9.4	5.72	52.7	958.5	8.85	8.4	6.76	58.4	965.6	11.26	8.2
27	3.42	68.2	579.6	8.27	12.7	2.61	48.4	715.8	5.58	11.1	4.18	111.2	406.4	8.77	14.9
28	4.23	60.5	500.7	4.98	14.6	2.88	33.7	682.1	9.96	11.9	3.89	66.1	691.5	10.92	11.0
29	7.62	122.1	723.1	4.62	9.5	4.78	89.5	839.6	5.27	8.9	5.67	45.1	828.2	13.09	9.7
30	2.97	56.5	542.0	7.17	13.9	2.07	35.3	556.1	4.93	14.4	3.62	85.1	530.3	6.73	13.1
31	3.15	51.9	473.7	5.14	15.7	2.27	34.0	638.9	9.73	12.7	3.17	84.2	582.3	9.39	12.2
32	7.54	95.3	792.8	4.87	9.2	5.47	65.5	969.6	9.25	8.1	6.59	94.6	929.8	9.70	8.1
SUM	3.26	58.2	517.1	5.62	14.3	2.37	37.4	633.5	6.56	12.7	3.20	48.5	591.5	9.80	13.1
BAG	3.71	69.2	567.5	6.62	12.9	2.84	45.1	714.6	6.57	11.2	3.66	78.1	630.4	8.92	11.6
33	1.36	17.7	78.0	0.09	80.6	1.01	34.1	101.1	0.15	56.2	0.40	2.3	91.8	0.22	91.8
34	11.26	223.5	1024.0	0.73	6.3	7.22	214.8	1343.6	1.42	5.2	35.37	63.9	1334.1	2.41	5.7
35	3.19	61.2	946.5	1.07	8.4	2.82	70.7	805.1	0.60	9.6	14.57	14.3	965.5	3.01	8.6
36	2.33	35.7	711.5	1.11	11.5	1.41	46.8	605.3	0.95	13.0	11.27	10.1	761.1	3.10	10.9
37	1.43	19.7	412.1	1.19	19.8	0.85	3.1	486.7	2.30	18.0	2.41	5.6	487.2	3.84	17.6
38	2.15	28.3	402.3	4.73	19.6	1.20	6.9	478.0	5.58	18.0	1.26	5.0	507.1	8.98	17.1
39	2.27	42.6	455.6	6.98	16.8	1.55	18.8	571.6	8.40	14.6	0.96	5.6	567.9	16.45	15.3

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX D,CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

DETROIT

VEH	YEAR	MAKE	MODL	CID
064	1972	LINC	CONT	460
065	1972	MERC	MONT	400
066	1972	OLDS	CUTL	350

MODE NO.	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG
1	4.26	130.1	544.1	1.10	11.6	4.42	21.4	918.7	5.41	9.2	3.07	51.7	558.7	2.77	13.7
2	6.05	249.4	681.5	1.32	8.1	3.66	7.1	620.9	5.50	13.8	4.20	56.0	598.3	2.76	12.7
3	8.69	255.0	1073.6	1.99	5.9	6.56	45.6	1151.0	6.23	7.1	6.81	94.2	989.1	2.44	7.7
4	3.96	155.3	552.9	1.32	11.0	2.76	16.1	688.3	3.49	12.3	2.79	42.8	537.5	2.60	14.5
5	3.50	182.6	450.0	1.40	11.9	1.92	12.4	663.7	4.49	12.9	2.35	25.5	430.4	6.03	18.6
6	3.96	204.3	421.6	1.18	11.8	1.67	4.9	441.3	6.04	19.5	2.62	21.0	416.0	4.74	19.4
7	3.96	200.3	350.1	2.22	13.1	2.39	135.0	779.9	6.38	8.9	3.34	35.1	449.5	8.85	15.7
8	4.59	251.7	467.7	1.50	10.1	1.43	40.7	521.4	7.71	15.0	2.88	25.0	484.9	6.22	16.6
9	3.32	238.1	461.0	1.62	10.5	1.44	37.2	715.3	8.38	11.4	3.08	23.8	483.2	9.53	16.7
10	6.12	265.4	476.8	1.34	9.7	2.42	14.9	524.2	9.42	16.0	3.50	19.1	520.5	8.18	15.8
11	5.26	248.2	525.6	1.67	9.5	2.76	53.2	858.3	8.39	9.3	3.20	22.4	562.0	10.61	14.6
12	7.44	354.3	619.7	1.59	7.4	2.74	19.4	630.3	10.81	13.3	3.95	21.2	637.9	9.98	13.0
13	6.48	307.5	584.4	1.80	8.2	3.19	74.4	960.5	9.73	8.2	3.78	26.5	656.7	12.09	12.5
14	5.55	266.9	456.0	1.16	9.9	2.18	20.9	490.1	6.83	16.7	2.86	17.6	485.2	7.24	17.0
15	7.65	218.3	574.8	1.27	9.4	4.03	24.8	495.5	5.26	16.2	5.28	36.8	512.1	4.32	15.1
16	15.60	344.4	1277.2	2.04	4.8	9.27	77.2	1001.2	8.15	7.7	11.05	102.5	1171.0	5.40	6.5
17	5.32	243.3	503.9	1.06	9.8	2.83	35.5	902.8	7.42	9.2	3.38	36.2	545.4	6.89	14.5
18	5.71	287.8	514.1	1.22	9.0	2.17	11.9	480.6	7.43	17.5	3.42	31.6	538.2	6.11	14.8
19	5.15	229.2	499.5	1.11	10.1	2.66	32.6	869.0	6.92	9.6	3.24	35.0	501.2	5.90	15.7
20	7.20	348.6	625.6	1.34	7.4	2.75	17.2	578.6	6.15	14.4	4.34	42.8	617.4	6.04	12.7
21	5.28	292.4	588.0	2.43	8.3	3.49	176.1	997.6	6.80	6.9	4.20	85.4	598.6	7.57	11.9
22	6.98	332.5	602.8	1.62	7.7	3.26	41.2	577.5	9.99	13.6	4.15	42.5	595.1	8.07	13.1
23	9.53	346.3	773.8	1.75	6.6	6.10	70.2	1068.0	7.00	7.4	6.49	68.2	802.0	7.36	9.5
24	4.63	256.5	453.9	1.23	10.2	2.07	29.1	783.1	8.55	10.6	2.56	28.9	481.1	9.40	16.6
25	5.27	283.8	452.4	1.11	9.7	1.78	10.7	473.0	9.76	17.9	2.81	20.9	481.4	6.99	17.0
26	10.60	296.9	805.9	1.66	6.8	5.37	25.8	703.1	5.48	11.7	7.32	56.7	734.5	5.83	10.5
27	5.68	304.0	525.0	1.37	8.7	2.26	24.4	952.7	9.94	8.9	3.35	33.9	566.3	10.28	14.1
28	6.95	310.7	527.5	1.21	8.6	2.38	11.4	518.7	9.93	16.3	3.89	24.8	555.6	7.18	14.6
29	8.40	312.5	699.2	1.35	7.3	4.79	39.3	984.1	8.64	8.4	6.01	57.3	765.5	6.95	10.1
30	4.63	258.5	462.8	1.16	10.0	2.04	38.5	826.0	8.32	9.9	2.96	29.9	521.2	10.49	15.4
31	5.45	303.9	473.2	1.17	9.2	1.95	13.8	486.7	9.70	17.2	2.83	22.4	478.9	6.79	17.0
32	10.91	330.4	808.3	1.66	6.5	5.02	24.3	747.8	9.58	11.1	7.07	51.2	760.2	6.53	10.3
SUM	4.95	240.4	505.0	1.38	9.9	2.17	26.9	656.4	8.53	12.6	2.99	26.5	520.5	7.42	15.5
BAG	5.79	284.2	549.8	1.44	8.7	2.68	38.0	707.6	9.35	11.4	3.57	30.6	569.7	7.80	14.1
33	0.58	14.6	115.2	0.11	63.4	0.73	9.1	92.9	0.15	81.0	0.47	7.4	112.2	0.04	70.8
34	6.43	134.5	1342.3	0.92	5.6	8.14	81.6	1107.8	1.69	7.0	5.78	80.6	1465.4	0.73	5.5
35	3.13	65.9	694.3	0.47	11.0	4.38	46.8	563.5	0.53	13.6	2.83	68.1	902.2	0.79	8.7
36	1.35	21.4	582.8	0.27	14.3	2.47	11.0	491.3	1.44	17.2	1.95	50.6	610.7	0.59	12.7
37	2.04	66.0	432.4	1.06	16.4	1.14	3.1	469.9	3.01	18.6	2.22	24.8	347.7	1.75	22.5
38	3.85	206.8	391.2	1.25	12.2	1.12	5.2	540.1	7.38	16.1	2.20	14.1	402.6	5.40	20.6
39	4.62	260.6	430.7	1.42	10.4	1.17	4.4	576.4	13.09	15.1	1.88	5.3	465.4	10.03	18.5

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX D,CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

DETROIT

VEH	YEAR	MAKE	MODL	CID
067	1972	OLDS	98	455

MODE NO.	HC	CO	CO2	NOX	MPG
1	2.21	26.5	745.1	2.68	11.2
2	2.29	19.1	837.0	5.14	10.2
3	3.45	20.4	1311.6	4.91	6.6
4	1.19	5.7	760.5	2.80	11.5
5	1.06	9.2	630.0	5.31	13.7
6	1.12	4.5	554.7	6.92	15.7
7	2.35	119.7	431.0	5.29	14.2
8	2.01	62.5	589.1	9.08	12.8
9	2.25	39.4	602.7	8.18	13.2
10	2.05	16.2	650.2	10.34	13.0
11	2.28	68.0	717.2	7.27	10.7
12	2.45	29.0	864.2	13.13	9.7
13	2.89	71.8	835.5	8.77	9.3
14	1.65	23.0	614.4	9.52	13.5
15	2.56	20.7	657.1	5.18	12.7
16	5.57	34.0	1500.7	5.96	5.6
17	1.60	19.0	704.7	6.07	12.0
18	1.52	9.7	724.2	8.22	11.9
19	1.35	12.6	681.5	6.60	12.6
20	1.92	9.6	854.0	9.39	10.1
21	3.57	202.2	700.5	4.38	8.6
22	3.01	79.0	737.9	8.94	10.2
23	3.84	46.3	1040.6	7.76	7.9
24	2.14	23.9	639.6	7.87	13.0
25	1.42	13.3	657.7	9.78	13.0
26	4.43	23.3	976.0	8.46	8.6
27	2.10	47.5	748.5	9.19	10.7
28	1.96	15.0	719.1	9.09	11.9
29	3.01	22.5	968.1	7.63	8.8
30	1.88	56.8	651.1	7.86	11.9
31	1.73	25.8	669.6	7.94	12.4
32	4.67	32.5	986.9	6.96	8.4
SUM	1.69	28.5	668.2	7.73	12.4
BAG	2.19	43.0	726.2	7.84	11.1
33	0.38	2.1	121.5	0.13	70.4
34	4.16	24.4	1551.9	2.59	5.5
35	2.21	11.3	868.2	0.74	9.9
36	0.72	5.6	796.8	1.09	11.0
37	1.23	4.1	471.2	2.03	18.4
38	0.92	3.0	512.1	6.50	17.1
39	0.61	3.8	604.5	10.81	14.5

VEH	YEAR	MAKE	MODL	CID
068	1972	OPEL	SEDA	116

MODE NO.	HC	CO	CO2	NOX	MPG
1	2.61	27.3	318.4	3.42	24.0
2	2.71	28.7	405.5	4.25	19.3
3	4.21	32.2	521.9	3.35	15.2
4	1.77	9.1	307.1	4.60	27.1
5	1.46	3.5	300.5	6.44	28.6
6	1.46	25.5	295.9	4.44	26.1
7	2.13	23.3	284.2	4.37	27.1
8	2.20	91.3	296.8	3.97	19.8
9	1.97	26.6	321.6	6.16	24.0
10	1.86	25.7	345.3	6.01	22.7
11	2.90	84.4	318.4	3.31	19.3
12	2.33	54.2	414.3	6.58	17.5
13	3.00	83.6	387.8	5.70	16.8
14	1.77	37.0	305.7	4.38	24.0
15	2.73	25.4	317.7	2.93	24.2
16	5.73	47.7	612.9	3.38	12.6
17	2.09	24.2	354.1	6.92	22.3
18	1.72	17.0	363.2	5.42	22.4
19	1.90	19.7	314.5	5.20	25.3
20	2.83	66.8	396.0	4.79	17.4
21	3.21	144.6	345.5	2.38	15.2
22	2.72	72.7	371.7	4.57	17.9
23	3.76	53.3	478.8	7.78	15.5
24	2.29	71.4	309.1	4.64	20.7
25	1.89	44.8	292.7	4.15	24.0
26	4.16	39.3	426.3	3.92	17.7
27	3.07	92.6	329.8	3.99	18.3
28	2.31	48.3	343.0	4.78	20.8
29	3.43	39.3	430.7	7.99	17.6
30	2.74	85.7	317.3	4.52	19.3
31	2.11	34.5	303.3	4.03	24.4
32	4.16	35.8	438.8	3.95	17.5
SUM	1.82	35.3	332.3	5.06	22.6
BAG	2.26	64.6	343.8	4.88	19.6
33	0.35	7.2	45.0	0.10	154
34	3.90	85.7	594.0	2.01	12.0
35	1.45	3.5	483.0	0.77	18.0
36	0.96	2.6	311.5	0.95	27.9
37	0.93	2.2	276.1	3.19	31.4
38	0.87	3.2	296.4	4.91	29.2
39	0.70	2.7	320.7	7.26	27.1

VEH	YEAR	MAKE	MODL	CID
069	1972	PLYM	VALI	225

MODE NO.	HC	CO	CO2	NOX	MPG
1	3.16	82.6	313.6	4.57	19.6
2	3.41	64.6	380.8	4.71	18.0
3	5.84	131.2	540.9	5.12	11.6
4	2.45	53.8	324.3	6.32	21.3
5	1.63	31.9	318.1	7.64	23.8
6	1.57	25.1	275.8	5.42	27.7
7	1.83	51.0	337.6	7.14	21.0
8	1.54	34.9	283.1	5.57	25.9
9	1.67	27.1	320.1	8.50	24.1
10	1.88	21.9	308.6	7.05	25.4
11	2.27	76.6	344.4	6.49	18.8
12	2.58	47.4	359.6	6.96	20.1
13	2.78	90.4	374.2	6.29	16.9
14	1.76	37.8	273.9	4.87	26.2
15	3.62	56.6	297.2	3.39	22.3
16	8.49	164.8	602.4	4.52	10.0
17	2.73	92.2	334.2	4.30	18.2
18	2.50	56.5	316.4	5.01	21.5
19	2.51	62.5	329.9	5.93	20.3
20	2.94	51.4	359.3	6.80	19.8
21	2.54	85.8	381.4	7.11	16.9
22	2.39	43.2	353.8	6.66	20.7
23	4.31	89.0	485.8	8.93	13.9
24	1.57	31.5	321.6	8.70	23.6
25	1.38	21.9	288.7	6.35	27.1
26	4.58	52.0	468.1	7.24	15.7
27	2.40	74.4	355.8	7.02	18.5
28	2.53	40.7	327.2	6.09	22.2
29	4.29	91.2	425.3	7.67	15.2
30	1.67	45.1	321.5	7.59	22.3
31	1.65	30.2	292.5	6.15	25.7
32	4.27	59.8	453.1	7.00	15.8
SUM	1.83	40.5	318.6	6.23	22.9
BAG	2.17	48.6	338.3	6.15	21.1
33	0.46	17.4	45.8	0.05	118
34	5.88	208.2	567.4	0.47	9.7
35	2.91	99.8	350.7	0.26	17.2
36	2.28	72.2	264.6	0.30	23.0
37	1.06	9.5	259.2	2.85	32.0
38	0.82	9.3	269.2	5.84	31.0
39	0.86	14.8	287.7	7.75	28.3

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX D.CONT'D

LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

DETROIT

	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID	VEH	YEAR	MAKE	MODL	CID
	070	1972	PLYM	FURY	318	071	1972	PONT	CATA	350	072	1972	PONT	BONN	455
MODE NO.	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG	HC	CO	CO2	NOX	MPG
1	6.58	142.0	446.9	2.91	12.8	11.87	212.3	559.1	5.15	9.5	6.92	163.8	647.0	2.53	9.6
2	6.15	59.9	699.9	2.79	10.9	9.93	154.7	669.3	4.67	9.4	7.09	143.3	774.1	2.37	8.7
3	10.87	242.2	954.3	3.46	6.5	19.82	330.3	957.4	6.59	5.8	12.21	264.1	1245.2	3.48	5.2
4	4.78	90.6	601.5	3.50	11.7	5.88	84.5	611.1	7.97	11.6	4.16	81.2	758.9	3.03	9.9
5	3.34	46.5	527.5	7.49	14.5	3.31	30.9	595.7	9.82	13.6	2.59	34.0	607.3	5.25	13.3
6	3.10	37.2	487.1	2.10	16.0	3.14	31.0	518.0	7.15	15.4	2.38	19.5	554.0	3.60	15.0
7	5.17	69.4	534.7	5.14	13.4	4.14	107.7	605.7	7.50	11.3	2.49	98.4	589.1	3.61	11.8
8	5.05	64.2	510.2	4.38	13.5	3.72	67.5	562.9	7.36	13.0	2.58	68.7	586.5	4.61	12.6
9	4.67	64.2	510.8	5.42	14.2	4.50	36.3	586.6	10.35	13.5	2.87	40.0	580.4	6.43	13.6
10	4.63	54.2	554.3	4.95	13.6	5.14	35.7	608.9	9.10	13.0	3.18	26.9	635.9	4.97	12.9
11	3.29	120.8	552.7	4.00	11.8	4.27	70.1	684.2	10.47	11.0	4.72	183.5	623.1	3.04	9.6
12	5.94	98.8	660.1	5.62	10.6	5.96	56.4	754.6	11.89	10.3	4.94	107.2	795.7	6.96	9.1
13	6.52	152.5	615.8	4.07	10.1	6.60	92.0	801.1	13.04	9.2	4.97	120.1	776.6	5.28	9.0
14	4.42	73.5	479.4	3.82	14.6	4.14	45.2	573.6	8.58	13.5	3.57	69.7	602.1	5.07	12.3
15	6.79	77.4	569.7	2.75	12.4	9.88	81.1	587.2	5.45	11.9	6.81	109.4	630.3	2.93	10.8
16	15.82	244.9	1072.6	3.63	5.9	26.65	314.6	1047.3	7.14	5.5	17.06	361.0	1212.3	3.65	4.8
17	6.12	138.4	532.7	3.86	11.5	7.80	118.6	682.2	9.27	9.9	5.06	126.0	675.5	5.36	10.0
18	5.00	83.7	532.8	3.52	13.0	5.23	61.8	588.5	7.07	12.6	4.40	79.5	648.9	4.05	11.3
19	5.54	108.8	537.5	3.47	12.2	6.73	92.0	638.2	9.19	11.0	4.63	133.0	645.1	4.38	10.2
20	6.64	106.7	630.9	3.48	10.8	7.88	76.0	705.9	8.67	10.4	5.30	95.5	767.9	4.85	9.5
21	7.61	200.9	593.3	4.73	9.5	7.53	248.0	705.2	5.24	7.9	5.52	223.0	706.1	2.92	8.3
22	7.15	117.6	612.7	4.77	10.8	6.99	103.0	672.8	7.40	10.4	5.24	142.2	756.6	5.09	8.9
23	11.89	199.0	770.5	5.43	7.9	14.24	180.5	916.0	11.03	7.1	8.23	186.4	982.4	5.33	6.8
24	4.60	83.3	500.9	4.05	13.7	4.05	54.9	594.0	9.87	12.8	3.15	69.5	591.6	5.33	12.5
25	3.98	61.7	477.0	3.64	15.1	3.65	43.4	561.4	8.51	13.8	3.17	51.2	527.3	5.78	14.4
26	10.27	111.3	787.0	3.92	8.9	14.05	125.5	777.5	7.52	8.7	10.99	160.3	909.3	4.95	7.4
27	5.94	140.5	544.5	4.34	11.3	6.00	81.0	690.8	11.76	10.6	4.87	119.5	699.1	6.41	9.8
28	5.53	80.0	568.7	4.36	12.5	6.61	61.3	629.9	8.35	11.9	5.19	72.2	667.1	5.18	11.1
29	10.23	176.0	709.9	4.11	8.7	13.88	170.2	1177.0	10.78	6.8	8.22	173.6	917.9	5.44	7.3
30	4.36	82.0	513.6	3.79	13.5	4.41	73.0	609.8	9.00	12.0	3.38	71.7	591.1	5.01	12.4
31	4.09	80.9	498.3	3.84	13.9	3.88	51.0	568.9	8.87	13.4	3.53	82.3	636.6	4.61	11.4
32	11.21	151.2	782.3	4.19	8.4	14.64	131.9	822.3	8.01	8.3	11.14	163.4	913.7	4.27	7.4
SUM	4.22	74.1	545.9	4.05	13.1	4.75	65.4	607.5	8.72	12.2	3.55	78.9	633.7	5.06	11.5
BAG	5.62	117.8	577.1	4.02	11.4	5.97	84.0	630.9	8.31	11.4	4.23	115.8	698.4	5.13	9.9
33	1.15	37.5	70.0	0.09	67.0	2.12	46.4	63.8	0.11	61.9	1.54	53.3	96.3	0.26	48.0
34	13.93	392.6	965.3	0.53	5.5	24.01	538.8	778.1	1.27	5.2	17.83	598.3	1233.6	2.65	4.0
35	5.51	176.5	604.3	0.53	9.9	10.47	250.6	476.6	0.56	9.8	6.69	249.5	587.5	0.40	8.9
36	2.19	28.5	680.2	1.00	12.1	5.32	138.4	388.0	0.42	14.3	3.97	114.8	688.1	0.67	10.1
37	1.07	5.3	487.3	1.67	17.8	2.48	28.7	444.6	2.73	17.8	2.32	35.1	436.0	1.35	17.8
38	2.09	19.8	464.4	3.26	17.7	1.77	7.7	510.8	6.74	16.8	1.41	28.9	550.7	3.88	14.8
39	2.23	25.4	494.1	5.19	16.4	1.74	8.5	564.4	12.35	15.2	1.12	8.1	577.2	8.13	15.0

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

```
                              APPENDIX D,CONT'D

              LISTING OF MODAL RESULTS ON INDIVIDUAL VEHICLES

                                   DETROIT

        VEH  YEAR  MAKE  MODL  CID       VEH  YEAR  MAKE  MODL  CID       VEH  YEAR  MAKE  MODL  CID
        ---  ----  ----  ----  ---       ---  ----  ----  ----  ---       ---  ----  ----  ----  ---
        073  1972  TOYO  CORO   97       074  1972  VOLK  SEDA   97       075  1972  VOLK  SEDA   97

MODE
NO.      HC     CO    CO2   NOX   MPG      HC     CO    CO2   NOX   MPG      HC     CO    CO2   NOX   MPG
----------------------------------------------------------------------------------------------------------
 1     3.46   26.7  163.5  1.80  41.0    7.18   97.2  185.6  2.12  24.6    3.15   60.9  301.0  3.06  21.8
 2     3.53   34.6  456.2  2.38  17.0    7.76   82.7  372.7  4.23  16.8    3.67   58.6  403.7  3.19  17.5
 3     6.03   33.9  543.6  2.25  14.4   13.50  146.4  500.3  3.45  11.5    5.80   98.9  601.0  3.11  11.5

 4     2.36   16.2  279.0  1.63  28.4    6.58   58.6  246.9  2.36  24.7    2.27   40.0  352.5  3.27  21.0
 5     1.40    8.1  251.6  2.32  33.0    2.90   27.5  231.6  4.28  31.3    2.15   32.5  324.1  5.01  23.2
 6     1.44   12.3  279.3  2.54  29.3    2.41   13.3  270.9  4.50  29.6    2.11   27.1  288.8  3.38  26.3

 7     1.86    9.9  213.0  3.33  37.8    2.43   22.9  232.1  4.79  32.2    2.12   31.2  316.9  5.66  23.8
 8     1.96   45.8  275.6  3.10  25.1    2.16   41.2  286.7  4.24  24.8    1.99   39.8  314.7  3.77  23.1
 9     1.98   18.0  218.3  3.96  35.1    2.32   23.6  236.8  4.68  31.6    3.20   39.5  317.8  4.63  22.8

10     2.23   20.0  317.4  4.35  24.9    2.06   26.6  308.8  4.63  24.8    4.21   46.1  356.3  3.73  20.1
11     2.27   18.6  267.5  4.72  29.2    3.96   47.6  267.6  5.05  25.0    2.91   38.7  325.2  5.51  22.5
12     2.65   28.0  413.6  5.70  19.0    3.45   38.7  388.0  6.19  19.3    3.73   50.1  438.5  5.79  16.8

13     2.74   22.5  311.7  4.69  25.0    4.28   60.8  362.4  6.08  18.8    3.56   54.9  387.3  6.41  18.3
14     2.09   26.1  287.7  3.75  26.5    2.56   39.9  244.8  3.54  28.1    3.11   35.6  325.9  3.90  22.7
15     3.40   23.2  349.0  2.63  22.4    6.04   56.0  272.5  2.69  23.4    3.95   44.5  389.8  3.04  18.8

16     7.37   39.4  797.3  3.78  10.1   21.60  147.0  565.3  4.14  10.3    9.38  120.2  755.9  4.52   9.1
17     2.36   13.0  287.9  3.74  28.1    5.44   61.5  306.7  5.32  21.1    3.08   46.8  361.5  5.90  20.0
18     1.92   10.7  328.8  3.76  25.2    3.55   36.1  309.8  4.24  23.5    2.49   32.1  344.9  3.72  22.0

19     1.84    8.7  279.1  3.06  29.7    4.30   44.2  286.6  5.27  24.0    2.33   36.9  341.7  5.03  21.8
20     2.16   13.5  400.7  4.03  20.7    3.83   36.9  382.7  5.46  19.6    3.36   36.2  400.9  4.27  18.9
21     2.66   27.3  283.7  3.64  26.5    3.92   64.5  317.6  4.58  20.6    3.13   49.1  331.2  5.10  21.2

22     2.83   43.2  356.3  4.11  20.5    3.42   53.5  301.2  3.86  22.4    4.39   60.4  403.2  4.39  17.3
23     4.40   30.3  414.7  3.90  18.6    7.88  100.1  422.1  4.67  14.7    5.60   79.3  506.5  5.57  13.7
24     1.81    9.5  269.9  5.18  30.5    2.77   28.4  299.3  5.98  25.2    2.84   29.9  359.3  5.68  22.5

25     1.73   18.3  289.5  3.65  27.4    2.18   24.2  244.4  4.03  30.7    3.64   38.3  331.8  4.06  22.0
26     3.86   26.8  503.5  3.49  15.9    8.58   58.7  384.7  3.78  17.6    6.85   66.2  569.2  4.71  12.8
27     2.24   13.1  302.9  6.20  26.8    4.38   42.9  310.8  6.94  22.6    3.97   50.2  374.9  6.16  19.0

28     2.20   13.8  350.7  4.35  23.4    3.48   31.0  305.3  4.16  24.3    4.14   40.6  379.3  4.51  19.5
29     3.83   21.1  385.7  4.01  20.6    8.37   86.5  385.8  4.66  16.2    5.56   68.3  461.0  5.73  15.1
30     1.84   11.4  266.6  5.24  33.6    3.52   29.1  318.9  6.28  23.6    2.49   30.6  354.5  6.13  21.6

31     1.86   26.0  308.6  3.75  25.0    2.38   27.5  241.3  3.67  30.4    3.19   42.1  344.0  4.14  21.1
32     4.25   44.4  584.4  4.46  13.3    8.79   62.3  387.0  3.99  17.3    5.92   71.3  554.9  4.72  12.9


SUM  1.87   16.2  297.3  3.81  27.0    2.80   31.2  289.1  4.61  25.6    2.42   29.9  352.4  4.59  21.8
BAG  2.22   21.9  318.0  3.97  24.7    3.82   42.5  306.4  4.28  23.0    3.34   42.5  372.2  4.49  19.7


33     0.51    4.8   40.1  0.15   180    1.55   17.2   36.2  0.06   130    0.96   12.1   51.2  0.11   121
34     3.86   35.8  726.0  1.12  11.2    8.76  206.0  446.9  0.32  11.1    4.23  130.6  650.7  0.84  10.2
35     1.25   19.5  604.4  0.85  13.9    2.66   56.4  449.4  0.53  16.2    2.44   52.5  383.4  0.74  18.7
36     1.09   12.7  355.5  0.55  23.4    1.58   34.4  308.0  0.53  24.2    1.48   32.5  309.4  0.74  24.3

37     0.38    4.7  285.5  0.93  30.2    0.84    9.8  238.9  1.62  34.5    0.64    2.9  295.9  2.61  29.3
38     0.92    4.4  237.7  2.92  35.9    0.67    3.7  235.4  3.73  36.5    0.59    5.0  308.1  3.84  27.9
39     1.41   11.7  255.1  4.93  31.9    0.75    6.1  272.3  6.16  31.2    0.65    3.5  334.5  5.38  26.0


EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO
```

Appendix E - Listing of Evaporative Emission Test Results on Individual Vehicles

Legend

VEH NO - Vehicle Number

MAKE - Vehicle Make

MODL - Vehicle Model

CID - Engine Displacement in Cubic Inches

TEST - Lists Whether Results were Obtained Using the SHED Procedure or the Canister Method

SK - Final Soak Temperature for Diurnal or Hot Soak Phase

TNK - Final Fuel Tank Temperature for Diurnal or Hot Soak Phase

HC - Hydrocarbon Emissions in grams for Hot Soak Phase, Diurnal Phase and the Sum of the Two Phases.

RVP - Reid Vapor Pressure of the Test Fuel

H/C - Hydrogen to Carbon Ratio of Test Fuel

IBP - Initial Boiling Point to Test Fuel in degrees Fahrenheit

5% thru 90% - Distillation Temperatures of Test Fuel in degrees Fahrenheit

FBP - Final Boiling Point of Test Fuel in degrees Fahrenheit

There were no vehicles with an unsealed evaporative emissions control system.

APPENDIX E

LISTING OF EVAPORATIVE EMISSION TEST RESULTS ON INDIVIDUAL VEHICLES

DENVER

VEH NO	MAKE	MODEL	CID	TEST	--DIURNAL-- (60 MIN.) -TEMP-			--HOT SOAK-- (60 MIN.) -TEMP-			TOTAL			-----DISTILLATION TEMPERATURES-----									
					ST	FNL	HC	ST	FNL	HC	HC	RVP	H/C	IBP	5%	10%	15%	20%	30%	40%	50%	90%	EP
15	AMC	HORN	232	SHED	79	84	14.3	87	96	16.7	31.0	7.5	2.29	94	136	150	163	174	192	205	217	325	328
				CAN	81	86		81	94		0.10	7.8	2.17	93	135	149	161	173	194	208	[illegible]	341	347
16	CHEV	VEGA	140	SHED	79	84	1.4	82	[illegible]	10.0	12.16	7.6	2.24	89	[illegible]	148	[illegible]	175	194	205	218	[illegible]	325
				CAN	78	80		83	[illegible]		[illegible]	7.6	2.13	84	[illegible]	150	165	176	194	206	217	321	329
17	CHEV	NOVA	250	SHED	80	83	4.8	87	[illegible]	15.4	[illegible]	7.6	[illegible]	87	132	144	163	172	193	208	217	325	327
				CAN	81	85		80	93		0.81	7.7	[illegible]	87	132	144	[illegible]	173	189	204	[illegible]	321	[illegible]
20	CHEV	MALI	350	SHED	79	[illegible]	7.4	83	[illegible]	3.8	11.20	8.2	[illegible]	89	[illegible]	[illegible]	[illegible]	169	[illegible]	212	[illegible]	[illegible]	[illegible]
				CAN	75	83		82	[illegible]		1.80	[illegible]	[illegible]	[illegible]	138	152	163	174	[illegible]	[illegible]	[illegible]	324	[illegible]
21	CHEV	MALI	350	SHED	[illegible]	83	21.7	[illegible]	[illegible]	15.8	37.4	7.8	2.30	93	[illegible]	150	162	174	[illegible]	[illegible]	217	[illegible]	[illegible]
				CAN	[illegible]	84		81	[illegible]		[illegible]	[illegible]	2.31	93	140	153	165	178	194	206	217	[illegible]	[illegible]
23	CHEV	CAPR	400	SHED	73	84	35.	84	103	5.7	41.18	[illegible]	2.30	91	134	147	159	173	192	204	[illegible]	321	[illegible]
				CAN	[illegible]	85		83	[illegible]		0.20	7.1	2.21	89	[illegible]	152	164	[illegible]	195	212	[illegible]	321	326
26	DODG	DART	225	SHED	73	86	10.3	78	[illegible]	3.8	14.57	7.4	2.14	91	136	151	163	172	192	[illegible]	[illegible]	[illegible]	[illegible]
				CAN	[illegible]	85		[illegible]	85		0.10	7.3	2.17	[illegible]	136	150	163	176	194	[illegible]	219	321	320
29	FORD	PINT	97	SHED	77	84	8.2	80	91	12.4	20.54	8.5	2.20	90	132	147	158	170	189	206	[illegible]	[illegible]	[illegible]
				CAN	[illegible]	[illegible]		81	93		1.00	9.2	2.30	90	[illegible]	147	156	168	192	[illegible]	[illegible]	[illegible]	357
31	FORD	TORI	351	SHED	77	84	0.4	85	[illegible]	13.7	20.13	8.1	2.17	95	134	152	163	174	[illegible]	207	218	[illegible]	[illegible]
				CAN	78	85		85	94		0.50	7.6	2.15	93	[illegible]	150	163	176	193	205	[illegible]	[illegible]	[illegible]
32	FORD	TORI	351	SHED	84	82	13.4	[illegible]	104	21.5	[illegible]	7.8	2.36	94	137	[illegible]	163	174	194	206	[illegible]	327	[illegible]
				CAN	79	84		76	87		1.00	7.4	2.74	[illegible]	137	[illegible]	163	174	192	[illegible]	216	325	[illegible]
[illegible]	FORD	STAT	400	SHED	[illegible]	84	[illegible]	86	[illegible]	24.8	34.21	7.4	2.13	87	132	[illegible]	[illegible]	[illegible]	194	[illegible]	219	[illegible]	[illegible]
				CAN	78	84		79	92		0.13	8.0	[illegible]	87	[illegible]	[illegible]	[illegible]	175	192	205	[illegible]	321	[illegible]
34	FORD	LTD	400	SHED	77	84	7.4	[illegible]	93	17.9	25.71	[illegible]	[illegible]	89	129	[illegible]	[illegible]	170	194	217	[illegible]	[illegible]	[illegible]
				CAN	79	83		78	95		0.40	9.1	[illegible]	[illegible]	128	143	157	167	191	215	[illegible]	[illegible]	[illegible]
35	MAZD	RX2	70	SHED	79	85	9.6	91	108	[illegible]	54.80	[illegible]	2.30	[illegible]	134	147	159	170	192	[illegible]	214	[illegible]	[illegible]
				CAN	79	83		77	103		0.90	9.0	[illegible]	[illegible]	127	143	156	168	192	[illegible]	218	[illegible]	[illegible]
36	MERC	BROU	429	SHED	76	85	31.6	[illegible]	101	23.3	[illegible]	7.4	2.29	86	[illegible]	140	160	171	[illegible]	[illegible]	[illegible]	321	325
				CAN	82	85		76	95		0.50	7.4	2.22	87	132	148	163	174	193	206	217	325	[illegible]
37	OLDS	CUTL	350	SHED	76	83	32.0	[illegible]	[illegible]	28.9	[illegible]	7.5	2.27	96	140	[illegible]	[illegible]	170	[illegible]	205	219	329	[illegible]
				CAN	80	85		83	[illegible]		0.15	7.7	2.26	91	[illegible]	148	162	176	194	206	217	[illegible]	[illegible]
38	OLDS	CUTL	455	SHED	77	83	14.5	84	109	30.5	[illegible]	7.6	2.28	91	[illegible]	147	162	172	192	[illegible]	217	[illegible]	[illegible]
				CAN	80	83		78	106		0.30	[illegible]	2.34	89	[illegible]	143	156	[illegible]	192	[illegible]	[illegible]	[illegible]	[illegible]
39	PLYM	VALI	318	SHED	77	84	[illegible]	83	92	5.4	13.87	7.6	[illegible]	[illegible]	132	149	[illegible]	[illegible]	192	[illegible]	216	[illegible]	[illegible]
				CAN	79	84		76	90		0.10	7.7	2.10	87	[illegible]	149	162	174	[illegible]	205	217	[illegible]	[illegible]
40	PLYM	FURY	360	SHED	80	85	30.8	86	97	14.2	[illegible]	8.3	2.30	[illegible]	131	150	[illegible]	175	[illegible]	[illegible]	219	[illegible]	[illegible]
				CAN	78	84		81	93		[illegible]	8.2	[illegible]	91	[illegible]	[illegible]	[illegible]	174	[illegible]	207	219	[illegible]	[illegible]
42	PONT	CATA	400	SHED	83	86	23.9	82	97	14.3	[illegible]	7.9	2.26	[illegible]	[illegible]	[illegible]	[illegible]	176	197	214	231	[illegible]	[illegible]
				CAN	79	83		82	93		[illegible]	7.9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	174	[illegible]	206	[illegible]	[illegible]	[illegible]
[illegible]	VOLK	SEDA	97	SHED	84	85	19.2	79	[illegible]	[illegible]	[illegible]	7.7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	170	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
				CAN	83	[illegible]		79	92		[illegible]	8.1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

HYDROCARBON EMISSIONS IN GRAMS
TEMPERATURES IN DEGREES FAHRENHEIT

Appendix F - Listing of Individual Test Results on Air-Conditioned Vehicles

Legend

VEH NO. - Vehicle Number

YR - Model Year

MAKE - Vehicle Make

MODL - Vehicle Model

CID - Engine Displacement in Cubic Inches

TEST TYPE - Indicates the portion of the test or composite
HOT TRANS - Hot transient portion of test
HOT STAB - Hot stabilized portion of test
HOT START - Composite of hot transient and hot stabilized

HC - Hydrocarbon Emissions in grams per mile

CO - Carbon Monoxide Emissions in grams per mile

CO2 - Carbon Dioxide Emissions in grams per mile

NOXC - Oxides of Nitrogen Emissions Corrected for Humidity in grams per mile.

Each vehicle is subjected to four tests. The tests are listed in Appendix F as follows:

FIRST TEST - Vehicles Air Conditioner Off - 10% is Added to Road Load Horsepower

SECOND TEST - Air Conditioner is Turned On, Road Load Horsepower is Set as Specified in the Federal Test Procedure.

THIRD TEST - Air Conditioner Turned Off, Road Load Horsepower Set as Specified for the Federal Test Procedure

FOURTH TEST - Repeat of FIRST TEST

APPENDIX F

LISTING OF INDIVIDUAL TEST RESULTS ON AIR-CONDITIONED VEHICLES

HOUSTON

VEH NO.	YR MAKE MODL CID	TEST TYPE	HC	CO	CO2	NOXC	FUEL ECON
021	73 CHEV CAMA 350	HOT TRANS	1.60	11.0	637.7	3.17	13.4
	A/C-OFF SIM-ON	HOT STAB	1.45	21.2	722.6	1.59	11.7
		HOT START	1.52	16.5	681.3	2.26	12.5
	SECOND TEST	HOT TRANS	1.59	19.0	672.8	3.84	12.5
	A/C-ON SIM-OFF	HOT STAB	1.02	45.8	764.5	2.82	10.6
		HOT START	1.29	32.7	719.8	3.32	11.4
	THIRD TEST	HOT TRANS	1.54	11.4	623.9	2.92	13.7
	A/C-OFF SIM-OFF	HOT STAB	1.46	16.6	721.8	1.37	11.8
		HOT START	1.50	14.1	674.2	2.13	12.7
	FOURTH TEST	HOT TRANS	1.68	27.8	773.7	3.02	10.8
	A/C-OFF SIM-ON	HOT STAB	1.35	16.1	719.6	1.57	11.8
		HOT START	1.51	21.8	745.9	2.17	11.3
027	73 DODG CHAR 318	HOT TRANS	2.89	48.0	605.3	3.90	12.9
	A/C-OFF SIM-ON	HOT STAB	3.21	71.6	678.2	2.57	11.1
		HOT START	3.05	60.1	642.7	3.2[illegible]	11.9
	SECOND TEST	HOT TRANS	2.70	46.2	604.5	4.01	12.9
	A/C-ON SIM-OFF	HOT STAB	3.36	71.1	716.8	3.3[illegible]	10.6
		HOT START	3.04	59.0	662.1	3.6[illegible]	11.6
	THIRD TEST	HOT TRANS	2.61	4[illegible].5	596.7	3.81	13.2
	A/C-OFF SIM-OFF	HOT STAB	3.02	62.1	689.3	2.58	11.1
		HOT START	2.82	53.6	644.2	3.18	12.0
	FOURTH TEST	HOT TRANS	2.55	45.3	605.3	3.8[illegible]	13.0
	A/C-OFF SIM-ON	HOT STAB	3.03	65.8	674.5	2.66	11.3
		HOT START	2.80	57.8	640.8	3.26	12.0

EMISSION RESULTS IN GRAMS PER MILE
FUEL ECONOMY IN MILES PER GALLON
FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO

APPENDIX F.CONT'D

LISTING OF INDIVIDUAL TEST RESULTS ON
AIR-CONDITIONED VEHICLES

HOUSTON

VEH NO. YR MAKE MODL CID	TEST TYPE	HC	CO	CO2	NOXC	FUEL ECON
032 75 FORD TORI 351	HOT TRANS	2.52	28.7	740.3	4.85	1[illegible].2
A/C-OFF SIM-ON	HOT STAB	2.94	52.1	837.2	2.64	9.6
	HOT START	2.76	40.7	790.1	3.72	10.3
SECOND TEST	HOT TRANS	2.91	35.8	769.2	5.24	10.7
A/C-ON SIM-OF	HOT STAB	3.28	63.8	853.0	3.02	9.2
	HOT START	3.10	49.2	812.5	4.10	9.[illegible]
THIRD TEST	HOT TRANS	2.25	24.5	728.4	4.54	1[illegible].5
A/C-OF SIM-OF	HOT STAB	2.78	49.2	831.1	2.45	9.7
	HOT START	2.52	37.2	781.1	3.47	10.5
FOURTH TEST	HOT TRANS	2.45	27.1	736.8	4.68	1[illegible].3
A/C-OF SIM-ON	HOT STAB	2.89	51.1	841.8	2.67	9.5
	HOT START	2.68	39.4	790.7	3.64	10.3
03[illegible] 75 FORD LTD 400	HOT TRANS	3.75	71.4	685.6	14.90	11.0
A/C-OF SIM-ON	HOT STAB	4.41	132.[illegible]	750.[illegible]	11.3[illegible]	9.1
	HOT START	4.9[illegible]	102.6	718.6	13.06	9.[illegible]
SECOND TEST	HOT TRANS	3.67	68.3	721.2	17.10	10.6
A/C-ON SIM-OF	HOT STAB	4.56	130.9	786.9	13.64	8.[illegible]
	HOT START	4.15	10[illegible].4	754.9	15.32	9.6
THIRD TEST	HOT TRANS	3.58	6[illegible].8	679.2	15.53	1[illegible].2
A/C-OF SIM-OF	HOT STAB	4.74	130.5	738.7	11.91	9.3
	HOT START	4.15	9[illegible].5	709.8	13.67	10.[illegible]
FOURTH TEST	HOT TRANS	4.09	80.7	770.8	15.40	9.7
A/C-OF SIM-ON	HOT STAB	4.7[illegible]	138.[illegible]	827.3	12.42	8.4
	HOT START	4.[illegible]	1[illegible]0.5	79[illegible].8	13.87	9.9

EMISSION RESULTS IN GRAMS PER MILE
FUEL ECONOMY IN MILES PER GALLON
FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO

APPENDIX F, CONT'D

LISTING OF INDIVIDUAL TEST RESULTS ON AIR-CONDITIONED VEHICLES

HOUSTON

VEH NO.	YR MAKE MODL CID	TEST TYPE	HC	CO	CO2	NOXC	FUEL ECON
042	73 PONT HONN 400	HOT TRANS	4.56	75.2	694.4	4.50	10.7
	A/C-OF SIM-ON	HOT STAB	5.80	152.6	710.1	2.54	9.2
		HOT START	5.20	115.0	702.5	3.39	9.0
	SECOND TEST	HOT TRANS	4.71	73.4	716.7	4.69	10.5
	A/C-ON SIM-OFF	HOT STAB	5.84	146.7	760.4	2.96	8.[illegible]
		HOT START	5.29	111.[illegible]	734.1	3.80	9.[illegible]
	THIRD TEST	HOT TRANS	4.17	70.2	648.6	3.61	11.5
	A/C-OFF SIM-OFF	HOT STAB	5.67	144.4	692.9	2.14	9.5
		HOT START	4.94	108.3	671.3	2.85	11.4
	FOURTH TEST	HOT TRANS	4.06	108.6	671.3	4.05	10.4
	A/C-OFF SIM-ON	HOT STAB	5.55	142.3	67[illegible].6	2.16	9.7
		HOT START	4.81	126.0	674.5	3.08	10.[illegible]
053	71 CHEV IMPA 350	HOT TRANS	4.59	101.1	543.0	5.11	12.4
	A/C-OFF SIM-ON	HOT STAB	6.1[illegible]	171.9	598.5	2.31	10.[illegible]
		HOT START	5.37	137.0	571.5	3.67	1[illegible].0
	SECOND TEST	HOT TRANS	4.61	[illegible].2	5[illegible].2	5.43	12.3
	A/C-ON SIM-OFF	HOT STAB	6.08	174.7	63[illegible].4	3.08	9.6
		HOT START	5.36	137.4	593.[illegible]	4.23	1[illegible].7
	THIRD TEST	HOT TRANS	4.63	96.4	515.9	4.74	13.[illegible]
	A/C-OFF SIM-OFF	HOT STAB	6.72	130.3	572.7	2.12	10.[illegible]
		HOT START	5.70	143.6	545.0	3.40	11.3
	FOURTH TEST	HOT TRANS	4.87	133.0	515.5	4.75	12.8
	A/C-OFF SIM-ON	HOT STAB	6.46	187.7	570.[illegible]	1.9[illegible]	10.[illegible]
		HOT START	5.69	146.5	543.5	3.34	1[illegible].2

EMISSION RESULTS IN GRAMS PER MILE
FUEL ECONOMY IN MILES PER GALLON
FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO

APPENDIX F,CONT'D

LISTING OF INDIVIDUAL TEST RESULTS ON AIR-CONDITIONED VEHICLES

HOUSTON

VEH NO.	YR MAKE MODL CID	TEST TYPE	HC	CO	CO2	NOXC	FUEL ECON
092	71 FORD GALA 351	HOT TRANS	4.93	44.3	583.7	8.64	13.3
	A/C-OF SIM-ON	HOT STAB	4.59	68.4	676.1	6.28	11.1
		HOT START	4.76	56.7	631.1	7.45	12.1
	SECOND TEST	HOT TRANS	5.05	48.3	564.3	8.34	13.5
	A/C-ON SIM-OFF	HOT STAB	4.51	66.9	680.0	6.35	11.1
		HOT START	4.77	57.9	623.7	7.31	12.2
	THIRD TEST	HOT TRANS	4.86	45.7	564.9	7.98	13.6
	A/C-OFF SIM-OFF	HOT STAB	4.31	63.7	659.5	6.14	11.3
		HOT START	4.57	54.9	618.6	7.04	12.3
	FOURTH TEST	HOT TRANS	4.80	45.8	569.4	8.37	13.5
	A/C-OF SIM-ON	HOT STAB	4.21	60.6	653.1	5.94	11.5
		HOT START	4.50	53.4	617.5	7.12	12.4
093	71 FORD BROU 429	HOT TRANS	3.35	24.9	658.3	11.37	12.5
	A/C-OF SIM-ON	HOT STAB	2.80	41.4	744.9	8.21	10.5
		HOT START	3.10	33.4	718.1	9.75	11.4
	SECOND TEST	HOT TRANS	3.51	28.9	635.7	11.15	12.9
	A/C-ON SIM-OF	HOT STAB	2.93	46.9	779.1	8.39	10.3
		HOT START	3.21	38.1	708.3	9.72	11.4
	THIRD TEST	HOT TRANS	3.35	32.4	631.9	10.41	12.8
	A/C-OF SIM-OFF	HOT STAB	2.83	47.5	760.2	7.36	10.5
		HOT START	3.07	40.1	697.8	8.84	11.5
	FOURTH TEST	HOT TRANS	3.35	32.4	656.4	10.92	12.4
	A/C-OF SIM-ON	HOT STAB	2.74	48.2	755.9	7.35	10.6
		HOT START	3.05	40.5	707.5	9.00	11.4

EMISSION RESULTS IN GRAMS PER MILE
FUEL ECONOMY IN MILES PER GALLON
FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO

APPENDIX F, CONT'D

LISTING OF INDIVIDUAL TEST RESULTS ON AIR-CONDITIONED VEHICLES

HOUSTON

VEH NO. YR MAKE MODL CID	TEST TYPE	HC	CO	CO2	NOXC	FUEL ECON
096 71 OLDS 98 455	HOT TRANS	2.2[illegible]	33.5	764.1	9.6[illegible]	10.8
A/C-OFF SIM-ON	HOT STAB	3.26	6[illegible].0	809.[illegible]	5.5[illegible]	9.6
	HOT START	2.75	50.2	787.6	7.5[illegible]	10.1
SECOND TEST	HOT TRANS	2.19	30.0	804.4	11.3[illegible]	10.3
A/C-ON SIM-OFF	HOT STAB	3.46	66.0	890.2	8.63	8.[illegible]
	HOT START	2.84	48.5	845.5	9.[illegible]	9.5
THIRD TEST	HOT TRANS	2.21	32.4	725.1	8.92	1[illegible].3
A/C-OFF SIM-OFF	HOT STAB	3.17	65.0	806.7	5.80	9.7
	HOT START	2.70	49.1	767.0	7.32	1[illegible].4
FOURTH TEST	HOT TRANS	1.93	29.4	751.2	9.47	1[illegible].0
A/C-OFF SIM-ON	HOT STAB	3.06	60.9	821.5	6.0[illegible]	9.6
	HOT START	2.51	45.6	787.3	7.7[illegible]	10.2
098 71 PLYM SATE 318	HOT TRANS	2.78	27.1	563.8	5.51	14.[illegible]
A/C-OFF SIM-ON	HOT STAB	3.48	50.6	623.0	6.61	1[illegible].4
	HOT START	3.14	39.2	594.2	7.53	1[illegible].3
SECOND TEST	HOT TRANS	3.09	40.4	561.2	8.34	14.0
A/C-ON SIM-OFF	HOT STAB	3.96	67.6	623.1	6.85	12.0
	HOT START	3.54	54.3	593.0	7.57	12.9
THIRD TEST	HOT TRANS	2.83	28.9	53[illegible].5	7.80	15.1
A/C-OFF SIM-OFF	HOT STAB	3.55	54.6	60[illegible].9	6.31	12.7
	HOT START	3.20	42.1	563.1	7.04	13.8
FOURTH TEST	HOT TRANS	2.84	29.8	546.2	[illegible].25	14.7
A/C-OFF SIM-ON	HOT STAB	3.37	50.3	601.5	6.47	12.8
	HOT START	3.11	40.3	574.6	7.3[illegible]	13.7

EMISSION RESULTS IN GRAMS PER MILE
FUEL ECONOMY IN MILES PER GALLON
FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO

APPENDIX F•CONT'D

LISTING OF INDIVIDUAL TEST RESULTS ON AIR-CONDITIONED VEHICLES

HOUSTON

VEH NO. YR MAKE	MODL CID	TEST TYPE	HC	CO	CO2	NOXC	FUEL ECON
131 69 CHEV	IMPA 350	HOT TRANS	4.43	73.1	571.6	3.18	12.7
A/C-OF	SIM-ON	HOT STAB	4.38	5[illegible].6	634.6	1.93	12.1
		HOT START	4.40	64.1	604.0	2.54	12.3
SECOND TEST		HOT TRANS	4.16	79.3	56[illegible].6	2.94	12.6
A/C-ON	SIM-OFF	HOT STAB	4.02	71.1	6[illegible]0.5	2.04	1[illegible].3
		HOT START	4.09	75.1	614.3	2.48	[illegible]
THIRD TEST		HOT TRANS	4.23	72.9	525.2	2.39	13.3
A/C-OFF	SIM-OF	HOT STAB	3.90	58.4	62[illegible].0	1.79	12.2
		HOT START	4.06	65.5	574.9	2.06	12.9
FOURTH TEST		HOT TRANS	4.58	72.6	527.8	2.43	13.5
A/C-OF	SIM-ON	HOT STAB	4.4[illegible]	63.2	517.4	1.60	12.[illegible]
		HOT START	4.51	67.8	573.8	2.[illegible]	1[illegible].6
13 69 CHRY	TOWN 383	HOT TRANS	5.13	77.0	659.6	6.70	1[illegible]
A/C-OF	SIM-ON	HOT STAB	4.94	60.4	750.8	6.47	10.3
		HOT START	5.03	68.5	706.4	6.56	10.7
SECOND TEST		HOT TRANS	5.26	99.7	655.1	5.90	10.7
A/C-ON	SIM-OFF	HOT STAB	5.32	84.5	763.8	6.13	9.7
		HOT START	5.29	91.9	710.9	6.03	10.2
THIRD TEST		HOT TRANS	4.78	69.6	630.9	6.23	1[illegible].7
A/C-OFF	SIM-OFF	HOT STAB	4.45	54.4	739.2	7.18	10.6
		HOT START	4.61	61.8	68[illegible].5	6.72	1[illegible]
FOURTH TEST		HOT TRANS	4.64	68.7	629.1	6.36	1[illegible].8
A/C-OF	SIM-ON	HOT STAB	4.49	5[illegible].0	737.5	6.24	1[illegible].6
		HOT START	4.56	61.7	684.7	6.33	1[illegible]

EMISSION RESULTS IN GRAMS PER MILE
FUEL ECONOMY IN MILES PER GALLON
FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO

APPENDIX F,CONT'D

LISTING OF INDIVIDUAL TEST RESULTS ON AIR-CONDITIONED VEHICLES

HOUSTON

VEH NO.	YR MAKE MODL CID	TEST TYPE	HC	CO	CO2	NOXC	FUEL ECON
139	69 FORD STAW 390	HOT TRANS	3.33	26.9	650.0	13.23	12.6
	A/C-OFF SIM-ON	HOT STAB	3.97	40.1	689.3	8.78	11.6
		HOT START	3.6	33.7	670.2	10.95	12.1
	SECOND TEST	HOT TRANS	3.62	25.6	662.3	13.02	12.4
	A/C-ON SIM-OFF	HOT STAB	3.74	44.8	731.5	10.05	10.9
		HOT START	3.68	35.5	697.8	11.49	11.6
	THIRD TEST	HOT TRANS	3.27	25.4	654.3	13.39	12.6
	A/C-OFF SIM-OFF	HOT STAB	3.43	40.8	680.7	8.25	11.7
		HOT START	3.35	33.3	667.8	10.76	12.1
	FOURTH TEST	HOT TRANS	3.29	22.9	632.8	13.08	13.1
	A/C-OFF SIM-ON	HOT STAB	3.40	39.0	687.8	8.86	11.7
		HOT START	3.35	31.2	661.0	10.91	12.3
140	69 MERC MONT 390	HOT TRANS	4.19	90.4	642.5	5.92	11.1
	A/C-OFF SIM-ON	HOT STAB	4.46	128.7	732.1	4.77	9.4
		HOT START	4.35	110.1	68[illegible].5	5.55	10.1
	SECOND TEST	HOT TRANS	5.47	107.7	6[illegible]2.0	6.07	10.5
	A/C-ON SIM-OFF	HOT STAB	5.01	148.0	747.6	4.94	8.9
		HOT START	5.2[illegible]	128.4	705.9	5.49	9.6
	THIRD TEST	HOT TRANS	4.39	92.0	617.0	5.53	11.4
	A/C-OFF SIM-OFF	HOT STAB	4.81	143.7	71[illegible].5	4.55	9.3
		HOT START	4.61	118.6	665.[illegible]	5.03	10.2
	FOURTH TEST	HOT TRANS	4.27	96.1	625.1	5.81	11.2
	A/C-OFF SIM-ON	HOT STAB	4.72	142.5	714.2	4.63	9.3
		HOT START	4.50	120.[illegible]	670.8	5.20	10.2

EMISSION RESULTS IN GRAMS PER MILE
FUEL ECONOMY IN MILES PER GALLON
FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO

LISTING OF INDIVIDUAL TEST RESULTS ON AIR-CONDITIONED VEHICLES

HOUSTON

VEH NO. YR MAKE MODL CID	TEST TYPE	HC	CO	CO2	NOXC	FUEL ECON
141 69 OLDS DELT 455	HOT TRANS	3.54	102.7	589.3	4.50	1[illegible].5
A/C-OFF SIM-ON	HOT STAB	4.43	145.8	6[illegible]8.4	2.59	9.7
	HOT START	3.90	124.8	629.9	3.52	10.6
SECOND TEST	HOT TRANS	3.58	103.9	60[illegible].6	3.80	1[illegible].4
A/C-ON SIM-OFF	HOT STAB	4.70	163.4	701.0	2.86	9.1
	HOT START	4.15	134.4	652.1	3.32	10.1
THIRD TEST	HOT TRANS	3.62	107.2	586.7	4.51	1[illegible].6
A/C-OFF SIM-OFF	HOT STAB	4.25	148.6	662.1	2.50	9.8
	HOT START	3.94	128.4	625.4	3.48	10.6
FOURTH TEST	HOT TRANS	3.51	103.3	585.5	2.68	1[illegible].7
A/C-OFF SIM-ON	HOT STAB	4.10	141.0	641.7	2.54	10.1
	HOT START	3.81	12[illegible].6	614.4	2.61	10.8
170 67 CHEV CAPR 327	HOT TRANS	6.12	64.0	556.2	4.54	13.1
A/C-OFF SIM-ON	HOT STAB	5.84	83.2	562.0	2.57	12.5
	HOT START	5.97	73.9	559.2	3.55	12.8
SECOND TEST	HOT TRANS	5.30	61.3	525.8	3.98	13.9
A/C-ON SIM-OFF	HOT STAB	6.45	90.7	612.1	2.91	1[illegible].4
	HOT START	5.89	76.4	570.1	3.43	12.5
THIRD TEST	HOT TRANS	5.61	5[illegible].6	541.5	4.32	13.7
A/C-OFF SIM-OFF	HOT STAB	6.23	81.9	569.2	2.61	12.4
	HOT START	5.92	69.1	5[illegible].7	3.4	13.0
FOURTH TEST	HOT TRANS	5.61	60.1	538.8	4.42	13.6
A/C-OFF SIM-ON	HOT STAB	6.45	84.0	562.2	2.50	12.4
	HOT START	6.04	72.4	550.8	3.44	13.0

EMISSION RESULTS IN GRAMS PER MILE
FUEL ECONOMY IN MILES PER GALLON
FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO

APPENDIX F.CONT'D

LISTING OF INDIVIDUAL TEST RESULTS ON AIR-CONDITIONED VEHICLES

HOUSTON

VEH NO.	YR MAKE MODL CID	TEST TYPE	HC	CO	CO2	NOXC	FUEL ECON
171	67 CHRY NEWP 383	HOT TRANS	7.46	208.2	477.6	1.27	10.7
	A/C-OFF SIM-ON	HOT STAB	6.63	173.4	554.5	1.49	10.4
		HOT START	7.03	192.[illegible]	517.1	1.38	10.5
	SECOND TEST	HOT TRANS	7.20	196.5	468.[illegible]	1.27	[illegible]
	A/C-ON SIM-OF	HOT STAB	6.31	174.7	551.1	1.50	10.5
		HOT START	6.75	185.2	[illegible]	1.39	10.8
	THIRD TEST	HOT TRANS	7.05	198.9	465.4	1.20	11.1
	A/C-OFF SIM-OFF	HOT STAB	6.49	181.1	533.4	1.30	10.6
		HOT START	6.76	189.7	50[illegible].3	1.25	10.8
	FOURTH TEST	HOT TRANS	7.49	206.6	462.7	1.21	10.9
	A/C-OFF SIM-ON	HOT STAB	6.49	180.5	543.4	1.35	10.5
		HOT START	6.97	193.2	504.1	1.28	10.7
175	67 FORD LTD 390	HOT TRANS	4.84	28.4	582.5	9.07	13.8
	A/C-OFF SIM-ON	HOT STAB	4.47	24.0	646.6	6.69	12.7
		HOT START	4.65	26.2	615.4	8.14	13.2
	SECOND TEST	HOT TRANS	4.49	24.1	580.5	9.22	14.0
	A/C-ON SIM-OFF	HOT STAB	4.39	27.3	631.8	6.38	12.9
		HOT START	4.44	25.7	606.9	7.76	13.4
	THIRD TEST	HOT TRANS	4.02	16.5	562.7	9.2[illegible]	14.8
	A/C-OFF SIM-OFF	HOT STAB	4.13	22.8	635.8	6.21	13.0
		HOT START	4.08	19.7	60[illegible].2	7.68	13.8
	FOURTH TEST	HOT TRANS	4.06	20.9	564.6	9.06	14.5
	A/C-OFF SIM-ON	HOT STAB	4.30	31.3	623.8	6.25	12.9
		HOT START	4.18	26.2	595.0	7.62	13.7

EMISSION RESULTS IN GRAMS PER MILE
FUEL ECONOMY IN MILES PER GALLON
FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO

APPENDIX F.CONT'D

LISTING OF INDIVIDUAL TEST RESULTS ON AIR-CONDITIONED VEHICLES

HOUSTON

VEH NO.	YR MAKE MODL CID	TEST TYPE	HC	CO	CO2	NOXC	FUEL ECON
176	67 MERC STAW 428	HOT TRANS	7.12	194.9	548.3	1.82	10.1
	A/C-OFF SIM-ON	HOT STAB	8.93	265.0	569.7	0.93	8.7
		HOT START	8.05	230.9	559.2	1.36	9.4
	SECOND TEST	HOT TRANS	7.33	205.7	540.8	1.65	10.0
	A/C-ON SIM-OFF	HOT STAB	9.16	274.7	565.4	0.90	8.7
		HOT START	8.27	241.1	552.4	1.27	9.3
	THIRD TEST	HOT TRANS	6.94	194.9	527.6	1.58	10.4
	A/C-OFF SIM-OF	HOT STAB	8.47	260.5	560.3	0.97	8.9
		HOT START	7.72	228.6	542.0	1.27	9.6
	FOURTH TEST	HOT TRANS	6.10	172.0	549.7	2.03	10.6
	A/C-OFF SIM-ON	HOT STAB	7.26	236.4	582.1	1.2[illegible]	9.1
		HOT START	6.70	205.0	56[illegible].3	1.61	9.8
177	67 OLDS 98 425	HOT TRANS	9.03	86.7	595.7	6.02	11.7
	A/C-OFF SIM-ON	HOT STAB	10.62	109.6	608.4	5.42	10.9
		HOT START	9.85	98.4	602.2	4.69	11.3
	SECOND TEST	HOT TRANS	8.71	8[illegible].8	553.7	5.04	12.3
	A/C-ON SIM-OF	HOT STAB	10.82	98.7	622.7	5.90	10.9
		HOT START	9.79	93.9	589.1	4.4[illegible]	11.0
	THIRD TEST	HOT TRANS	8.09	70.3	542.5	5.4	13.1
	A/C-OFF SIM-OF	HOT STAB	10.87	93.0	570.5	5.42	11.8
		HOT START	9.52	81.9	5[illegible]0.9	4.[illegible]0	12.4
	FOURTH TEST	HOT TRANS	8.35	75.0	538.0	[illegible]	13.[illegible]
	A/C-OFF SIM-ON	HOT STAB	10.81	91.8	569.3	5.[illegible]	11.9
		HOT START	9.61	85.4	5[illegible]4.1	4.14	12.4

EMISSION RESULTS IN GRAMS PER MILE
FUEL ECONOMY IN MILES PER GALLON
FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO

APPENDIX F

LISTING OF INDIVIDUAL TEST RESULTS ON AIR-CONDITIONED VEHICLES

DETROIT

VEH NO.	YR MAKE MODL CID	TEST TYPE	HC	CO	CO2	NOXC	FUEL ECON
001	74 BUIC ELEC 455	HOT TRANS	2.22	19.6	678.1	3.47	12.4
	A/C-OFF SIM-ON	HOT STAB	1.47	10.1	780.4	2.12	11.1
		HOT START	1.84	14.7	750.6	2.78	11.7
	SECOND TEST	HOT TRANS	1.15	16.5	616.4	2.68	13.7
	A/C-ON SIM-OFF	HOT STAB	1.69	12.2	740.1	2.10	11.6
		HOT START	1.43	14.3	679.9	2.38	12.6
	THIRD TEST	HOT TRANS	1.31	17.2	613.0	2.68	13.8
	A/C-OFF SIM-OFF	HOT STAB	1.61	12.0	732.6	2.03	11.7
		HOT START	1.47	14.6	674.4	2.35	12.6
	FOURTH TEST	HOT TRANS	1.12	16.5	620.8	2.77	13.6
	A/C-OFF SIM-ON	HOT STAB	1.60	12.4	716.2	1.95	12.0
		HOT START	1.36	14.4	6[illegible]9.8	2.35	12.7
003	74 CHEV IMPA 350	HOT TRANS	2.08	38.4	787.1	6.56	10.4
	A/C-OFF SIM-ON	HOT STAB	2.10	14.9	862.0	6.06	9.9
		HOT START	2.09	26.4	825.5	6.30	10.2
	SECOND TEST	HOT TRANS	2.48	56.1	7[illegible]4.4	5.26	10.2
	A/C-ON SIM-OFF	HOT STAB	5.13	81.0	1399.4	16.11	5.8
		HOT START	4.08	68.9	1095.2	10.83	7.3
	THIRD TEST	HOT TRANS	2.29	35.4	810.8	5.57	10.2
	A/C-OFF SIM-OFF	HOT STAB	2.10	18.5	911.1	5.63	9.4
		HOT START	2.19	26.7	862.3	5.60	9.7
	FOURTH TEST	HOT TRANS	1.81	35.3	785.0	5.91	10.5
	A/C-OFF SIM-ON	HOT STAB	2.02	16.5	894.8	4.89	9.6
		HOT START	1.92	25.7	841.4	5.39	10.0

EMISSION RESULTS IN GRAMS PER MILE
FUEL ECONOMY IN MILES PER GALLON
FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO

APPENDIX F,CONT'D

LISTING OF INDIVIDUAL TEST RESULTS ON AIR-CONDITIONED VEHICLES

DETROIT

VEH NO. YR MAKE MODL CID	TEST TYPE	HC	CO	CO2	NOXC	FUEL ECON
0 7 74 OLDS CUTL 350	HOT TRANS	2.28	13.6	710.0	4.30	12.0
A/C-OFF SIM-ON	HOT STAB	2.36	11.8	824.8	3.5[illegible]	10.4
	HOT START	2.32	12.7	768.9	3.92	11.1
SECOND TEST	HOT TRANS	2.92	19.2	692.6	4.13	12.1
A/C-ON SIM-OFF	HOT STAB	2.69	10.2	876.2	4.76	9.9
	HOT START	2.80	14.5	786.8	4.45	10.8
THIRD TEST	HOT TRANS	1.98	12.8	699.0	3.70	12.2
A/C-OFF SIM-OFF	HOT STAB	2.18	12.0	813.6	3.21	10.6
	HOT START	2.08	12.4	757.8	3.45	11.3
FOURTH TEST	HOT TRANS	1.94	11.5	714.1	3.59	12.0
A/C-OFF SIM-ON	HOT STAB	2.07	8.2	809.[illegible]	3.29	10.7
	HOT START	2.01	9.8	763.[illegible]	3.4[illegible]	11.3
0 8 74 PLYM SATE 318	HOT TRANS	4.16	56.6	600.8	3.40	12.6
A/C-OFF SIM-ON	HOT STAB	4.62	98.2	643.3	1.85	10.9
	HOT START	4.39	77.9	622.6	2.60	11.7
SECOND TEST	HOT TRANS	4.09	56.9	612.8	3.54	12.4
A/C-ON SIM-OF	HOT STAB	4.52	102.4	6 7.8	2.14	10.5
	HOT START	4.31	80.3	641.0	2.82	11.4
THIRD TEST	HOT TRANS	3.75	52.9	579.6	3.24	13.2
A/C-OFF SIM-OF	HOT STAB	4.45	93.0	631.1	1.76	11.1
	HOT START	4.11	76.5	606.0	2.48	12.0
FOURTH TEST	HOT TRANS	3.75	53.7	595.4	3.39	12.8
A/C-OFF SIM-ON	HOT STAB	4.36	71.6	650.6	1.87	11.4
	HOT START	4.07	62.9	623.8	2.61	12.1

EMISSION RESULTS IN GRAMS PER MILE
FUEL ECONOMY IN MILES PER GALLON
FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO

APPENDIX F,CONT'D

LISTING OF INDIVIDUAL TEST RESULTS ON AIR-CONDITIONED VEHICLES

DETROIT

VEH NO.	YR MAKE MODL CID	TEST TYPE	HC	CO	CO2	NOXC	FUEL ECON
009	74 PONT BONI 400	HOT TRANS	3.30	20.5	819.4	5.28	10.3
	A/C-OFF SIM-ON	HOT STAB	3.07	20.6	896.0	3.30	9.5
		HOT START	3.18	20.6	858.7	4.26	9.8
	SECOND TEST	HOT TRANS	4.87	31.4	791.8	4.61	10.4
	A/C-ON SIM-OFF	HOT STAB	3.43	29.4	906.2	3.35	9.2
		HOT START	4.13	30.4	850.5	3.96	9.7
	THIRD TEST	HOT TRANS	3.31	19.1	739.8	3.86	11.4
	A/C-OFF SIM-OFF	HOT STAB	3.05	20.4	868.1	2.92	9.8
		HOT START	3.18	19.8	805.6	3.38	10.5
	FOURTH TEST	HOT TRANS	2.92	20.4	798.0	4.74	10.6
	A/C-OFF SIM-ON	HOT STAB	2.93	17.5	873.1	2.97	9.8
		HOT START	2.92	18.9	836.5	3.83	10.1
023	75 CHEV CAPR 400	HOT TRANS	3.17	45.9	654.4	3.83	12.9
	A/C-OFF SIM-ON	HOT STAB	2.16	54.4	737.4	2.52	10.7
		HOT START	2.65	50.3	701.8	3.19	11.2
	SECOND TEST	HOT TRANS	3.50	56.6	695.1	4.05	12.2
	A/C-ON SIM-OFF	HOT STAB	2.87	53.8	772.0	3.16	10.2
		HOT START	3.21	57.7	754.6	3.59	10.6
	THIRD TEST	HOT TRANS	2.76	40.7	645.1	3.59	12.4
	A/C-OFF SIM-OFF	HOT STAB	2.14	46.0	735.1	2.52	10.9
		HOT START	2.20	43.4	690.5	3.04	11.6
	FOURTH TEST	HOT TRANS	3.08	46.9	658.0	3.61	12.2
	A/C-OFF SIM-ON	HOT STAB	2.54	60.3	718.4	2.57	10.7
		HOT START	2.70	56.9	679.5	2.97	11.4

EMISSION RESULTS IN GRAMS PER MILE
FUEL ECONOMY IN MILES PER GALLON
FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO

APPENDIX F, CONT'D

LISTING OF INDIVIDUAL TEST RESULTS ON AIR-CONDITIONED VEHICLES

DETROIT

VEH NO. YR MAKE MODL CID	TEST TYPE	HC	CO	CO2	NOXC	FUEL ECON
032 73 FORD MUST 351	HOT TRANS	3.54	52.4	564.3	2.59	13.5
A/C-OFF SIM-ON	HOT STAB	4.12	84.9	628.9	2.02	[illegible]
	HOT START	3.84	68.8	597.4	2.50	12.4
SECOND TEST	HOT TRANS	6.33	51.2	573.0	2.60	13.2
A/C-ON SIM-OFF	HOT STAB	4.06	82.9	620.5	1.92	11.6
	HOT START	5.37	67.4	597.4	[illegible]	12.3
THIRD TEST	HOT TRANS	3.84	49.8	[illegible]	2.52	13.8
A/C-OFF SIM-OFF	HOT STAB	4.25	84.4	621.1	1.85	11.6
	HOT START	4.15	67.8	587.9	2.17	12.6
FOURTH TEST	HOT TRANS	4.08	48.9	560.6	2.43	13.6
A/C-OFF SIM-ON	HOT STAB	4.97	[illegible]	610.1	1.80	11.6
	HOT START	4.54	69.2	586.0	2.10	12.5
036 73 MERC MARQ 429	HOT TRANS	4.29	74.3	[illegible]	7.09	[illegible]
A/C-OFF SIM-ON	HOT STAB	3.41	95.8	871.5	5.36	8.6
	HOT START	3.84	85.4	796.1	4.20	9.4
SECOND TEST	HOT TRANS	4.53	63.0	776.5	6.19	[illegible]
A/C-ON SIM-OFF	HOT STAB	3.40	85.4	882.8	5.59	8.6
	HOT START	3.95	74.5	831.1	4.86	9.2
THIRD TEST	HOT TRANS	3.60	53.7	772.9	5.95	10.2
A/C-OFF SIM-OFF	HOT STAB	3.36	82.2	874.8	5.39	8.7
	HOT START	3.48	68.4	825.2	4.64	9.4
FOURTH TEST	HOT TRANS	3.26	58.0	773.1	6.09	10.1
A/C-OFF SIM-ON	HOT STAB	[illegible]	81.3	[illegible]	5.45	[illegible]
	HOT START	3.24	69.9	829.1	4.73	[illegible]

EMISSION RESULTS IN GRAMS PER MILE
FUEL ECONOMY IN MILES PER GALLON
FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO

APPENDIX F, CONT'D

LISTING OF INDIVIDUAL TEST RESULTS ON AIR-CONDITIONED VEHICLES

DETROIT

VEH NO. YR MAKE MODL CID	TEST TYPE	HC	CO	CO2	NOXC	FUEL ECON
042 73 PONT GRNA 400	HOT TRANS	4.57	35.4	652.9	7.18	12.3
A/C-OFF SIM-ON	HOT STAB	5.23	62.0	710.5	3.29	10.8
	HOT START	4.91	49.1	682.4	5.18	11.5
SECOND TEST	HOT TRANS	4.15	37.1	677.8	7.54	11.8
A/C-ON SIM-OFF	HOT STAB	4.43	55.2	805.7	5.58	9.8
	HOT START	4.30	46.4	743.5	6.53	10.7
THIRD TEST	HOT TRANS	4.28	32.6	637.6	6.30	12.6
A/C-OFF SIM-OFF	HOT STAB	4.71	51.2	751.3	3.20	10.5
	HOT START	4.50	42.1	695.9	4.71	11.4
FOURTH TEST	HOT TRANS	3.68	29.2	584.2	5.68	13.8
A/C-OFF SIM-ON	HOT STAB	4.57	45.1	718.5	3.55	11.1
	HOT START	4.14	36.8	653.1	4.49	12.3
046 72 BUIC LESA 350	HOT TRANS	8.19	96.9	609.1	7.27	11.3
A/C-OFF SIM-ON	HOT STAB	11.27	190.4	643.6	4.09	9.0
	HOT START	9.77	144.9	628.3	5.64	10.[illegible]
SECOND TEST	HOT TRANS	9.45	135.5	645.4	7.17	10.0
A/C-ON SIM-OFF	HOT STAB	12.96	173.8	677.7	4.94	8.9
	HOT START	11.25	155.1	662.0	6.03	9.4
THIRD TEST	HOT TRANS	8.98	107.8	565.3	6.28	11.6
A/C-OFF SIM-OFF	HOT STAB	13.31	207.3	61[illegible].8	3.40	9.1
	HOT START	11.21	158.9	589.2	4.80	10.2
FOURTH TEST	HOT TRANS	8.91	107.3	584.3	6.52	11.4
A/C-OFF SIM-ON	HOT STAB	12.37	193.7	609.2	3.51	9.3
	HOT START	10.69	151.7	547.2	5.02	10.2

EMISSION RESULTS IN GRAMS PER MILE
FUEL ECONOMY IN MILES PER GALLON
FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO

APPENDIX F, CONT'D

LISTING OF INDIVIDUAL TEST RESULTS ON AIR-CONDITIONED VEHICLES

DETROIT

VEH NO. YR MAKE MODL CID	TEST TYPE	HC	CO	CO2	NOXC	FUEL ECON
051 72 CHEV STAW 350	HOT TRANS	3.42	26.5	726.2	8.89	[illegible]
A/C-OF SIM-ON	HOT STAB	2.71	31.5	819.1	5.27	10.1
	HOT START	3.86	29.1	773.9	7.03	10.7
SECOND TEST	HOT TRANS	3.51	82.7	[illegible]	8.02	10.6
A/C-ON SIM-OF	HOT STAB	4.09	98.3	796.1	5.14	9.2
	HOT START	3.71	90.7	749.3	6.54	9.8
THIRD TEST	HOT TRANS	2.76	43.8	663.7	7.60	12.0
A/C-OF SIM-OF	HOT STAB	3.46	67.9	774.7	4.58	[illegible]
	HOT START	3.12	56.1	720.7	5.95	10.8
FOURTH TEST	HOT TRANS	2.97	48.8	[illegible]	7.68	[illegible]
A/C-OF SIM-ON	HOT STAB	3.36	63.1	775.8	4.43	[illegible]
	HOT START	3.17	56.2	720.6	6.01	10.8
061 72 FORD GALA 351	HOT TRANS	4.08	66.6	608.5	6.38	12.2
A/C-OF SIM-ON	HOT STAB	4.10	96.4	583.2	2.85	10.5
	HOT START	4.09	81.9	[illegible]	4.57	[illegible]
SECOND TEST	HOT TRANS	4.61	74.1	592.1	6.45	12.3
A/C-ON SIM-OF	HOT STAB	7.25	131.7	682.0	[illegible]	9.7
	HOT START	5.97	103.7	638.3	4.67	10.8
THIRD TEST	HOT TRANS	3.95	65.7	551.9	5.54	[illegible]
A/C-OF SIM-OF	HOT STAB	3.74	99.2	648.2	2.48	[illegible]
	HOT START	3.84	82.9	601.3	5.97	[illegible]
FOURTH TEST	HOT TRANS	4.26	89.3	705.0	8.51	10.3
A/C-OF SIM-ON	HOT STAB	4.02	[illegible]	651.8	2.28	[illegible]
	HOT START	4.13	106.1	577.7	5.32	10.3

EMISSION RESULTS IN GRAMS PER MILE
FUEL ECONOMY IN MILES PER GALLON
FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO

APPENDIX F.CONT'D

LISTING OF INDIVIDUAL TEST RESULTS ON AIR-CONDITIONED VEHICLES

DETROIT

VEH NO.	YR MAKE MODL CID	TEST TYPE	HC	CO	CO2	NOXC	FUEL ECON
06[illegible]	72 OLDS CUTL 350	HOT TRANS	4.03	27.6	[illegible]	7.19	13.8
	A/C-OF SIM-ON	HOT STAB	3.80	[illegible]	675.8	3.91	[illegible]
		HOT START	3.91	36.1	[illegible]	[illegible]	12.6
	SECOND TEST	HOT TRANS	3.91	25.4	[illegible]	8.79	12.7
	A/C-ON SIM-OFF	HOT STAB	3.67	41.6	726.4	5.12	[illegible]
		HOT START	3.79	[illegible]	[illegible]	6.90	[illegible]
	THIRD TEST	HOT TRANS	3.55	24.8	568.6	6.55	14.3
	A/C-OFF SIM-OFF	HOT STAB	3.42	38.7	650.7	3.58	12.3
		HOT START	3.48	31.9	610.8	4.95	13.2
	FOURTH TEST	HOT TRANS	3.72	24.8	564.2	6.61	14.4
	A/C-OFF SIM-ON	HOT STAB	3.42	37.4	642.0	3.58	12.5
		HOT START	3.57	31.2	604.5	5.05	13.3
083	71 CHEV STAW 350	HOT TRANS	3.32	59.2	644.9	7.82	11.9
	A/C-OFF SIM-ON	HOT STAB	4.34	74.4	680.4	5.89	10.9
		HOT START	3.84	67.0	663.1	6.83	11.4
	SECOND TEST	HOT TRANS	3.90	89.1	677.9	6.67	10.7
	A/C-ON SIM-OFF	HOT STAB	4.61	86.7	748.5	8.05	9.9
		HOT START	4.26	87.9	714.1	8.55	10.3
	THIRD TEST	HOT TRANS	3.59	64.5	615.2	8.11	12.2
	A/C-OFF SIM-OFF	HOT STAB	4.13	70.6	675.9	6.11	11.1
		HOT START	3.87	67.7	646.9	7.08	11.6
	FOURTH TEST	HOT TRANS	3.60	51.1	[illegible]	8.79	12.1
	A/C-OFF SIM-ON	HOT STAB	3.93	[illegible]	678.3	6.36	11.2
		HOT START	3.76	[illegible]	659.4	7.55	[illegible]

EMISSION RESULTS IN GRAMS PER MILE
FUEL ECONOMY IN MILES PER GALLON
FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO

APPENDIX F, CONT'D

LISTING OF INDIVIDUAL TEST RESULTS ON AIR-CONDITIONED VEHICLES

DETROIT

VEH NO. YR MAKE MODL CID	TEST TYPE	HC	CO	CO2	NOXC	FUEL ECON
092 71 FORD LTD 351	HOT TRANS	4.86	35.8	650.2	7.10	12.3
A/C-OFF SIM-ON	HOT STAB	3.79	34.6	744.1	4.64	11.0
	HOT START	4.31	35.2	698.4	5.84	11.6
SECOND TEST	HOT TRANS	3.06	36.7	657.6	6.97	12.2
A/C-ON SIM-OFF	HOT STAB	3.23	40.7	759.5	5.18	10.6
	HOT START	3.15	38.8	709.[illegible]	6.05	11.4
THIRD TEST	HOT TRANS	3.93	36.0	635.3	6.59	12.6
A/C-OFF SIM-OFF	HOT STAB	2.60	31.9	740.5	4.93	11.1
	HOT START	3.25	3[illegible].9	68[illegible].4	5.74	11.8
FOURTH TEST	HOT TRANS	2.76	32.8	647.9	6.81	12.5
A/C-OFF SIM-ON	HOT STAB	2.44	30.0	741.2	4.59	11.1
	HOT START	2.60	31.3	695.8	5.67	11.8
096 71 OLDS DELT 455	HOT TRANS	2.47	24.7	680.6	7.83	12.1
A/C-OFF SIM-ON	HOT STAB	1.73	25.4	804.6	3.93	10.4
	HOT START	2.09	25.1	747.1	5.83	11.2
SECOND TEST	HOT TRANS	2.82	36.8	709.6	8.14	11.4
A/C-ON SIM-OFF	HOT STAB	2.27	61.8	847.9	4.23	9.3
	HOT START	2.54	49.6	780.6	6.13	10.2
THIRD TEST	HOT TRANS	2.10	35.2	656.8	6.53	12.3
A/C-OFF SIM-OFF	HOT STAB	1.7	46.0	795.5	3.19	10.2
	HOT START	1.93	40.8	728.0	4.82	11.1
FOURTH TEST	HOT TRANS	1.92	31.6	645.7	6.48	12.7
A/C-OFF SIM-ON	HOT STAB	2.0[illegible]	53.0	815.6	3.38	9.8
	HOT START	1.96	42.6	732.9	4.89	11.0

EMISSION RESULTS IN GRAMS PER MILE
FUEL ECONOMY IN MILES PER GALLON
FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO

APPENDIX F, CONT'D

LISTING OF INDIVIDUAL TEST RESULTS ON AIR-CONDITIONED VEHICLES

DETROIT

VEH NO. YR MAKE MODL CID	TEST TYPE	HC	CO	CO2	NOXC	FUEL ECON
098 71 PLYM SATE 318	HOT TRANS	3.05	32.7	552.6	7.41	14.5
A/C-OFF SIM-ON	HOT STAB	4.20	64.5	[illegible]	5.37	13.2
	HOT START	3.64	49.0	556.3	6.36	13.8
SECOND TEST	HOT TRANS	[illegible]	49.6	[illegible]	7.03	[illegible]
A/C-ON SIM-OFF	HOT STAB	5.09	92.7	[illegible]	5.03	[illegible]
	HOT START	4.76	71.9	569.6	6.01	12.7
THIRD TEST	HOT TRANS	3.05	28.5	523.4	6.89	15.4
A/C-OFF SIM-OFF	HOT STAB	3.65	52.5	[illegible]	5.13	13.7
	HOT START	[illegible]	40.8	540.1	[illegible]	14.4
FOURTH TEST	HOT TRANS	2.90	29.4	539.5	7.05	14.9
A/C-OFF SIM-ON	HOT STAB	3.73	[illegible]	567.1	5.42	13.5
	HOT START	3.32	[illegible]	553.7	6.21	[illegible]
139 69 FORD GALA 390	HOT TRANS	4.06	51.4	589.3	8.56	13.0
A/C-OFF SIM-ON	HOT STAB	4.91	92.5	613.2	5.90	11.5
	HOT START	4.50	72.5	601.6	7.19	12.2
SECOND TEST	HOT TRANS	4.78	74.3	606.2	9.18	12.0
A/C-ON SIM-OFF	HOT STAB	5.20	[illegible]	[illegible]	5.68	[illegible]
	HOT START	[illegible]	87.9	614.6	7.89	[illegible]
THIRD TEST	HOT TRANS	4.26	51.6	577.3	8.34	12.9
A/C-OFF SIM-OFF	HOT STAB	5.05	97.8	611.5	5.99	11.4
	HOT START	4.67	80.2	[illegible]	7.13	12.1
FOURTH TEST	HOT TRANS	4.36	[illegible]	379.9	8.57	17.8
A/C-OFF SIM-ON	HOT STAB	4.98	93.1	606.6	5.76	11.5
	HOT START	4.67	79.9	[illegible]	7.13	13.9

EMISSION RESULTS IN GRAMS PER MILE
FUEL ECONOMY IN MILES PER GALLON
FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO

APPENDIX F•CONT'D

LISTING OF INDIVIDUAL TEST RESULTS ON AIR-CONDITIONED VEHICLES

DETROIT

VEH NO. YR MAKE MODL CID	TEST TYPE	HC	CO	CO2	NOXC	FUEL ECON
140 69 MERC MONT 390	HOT TRANS	4.52	46.8	627.5	8.87	12.4
A/C-OFF SIM-ON	HOT STAB	5.19	73.5	697.4	6.40	10.7
	HOT START	4.87	60.5	663.4	7.60	11.5
SECOND TEST	HOT TRANS	5.03	74.8	634.6	8.40	11.6
A/C-ON SIM-OFF	HOT STAB	5.89	105.8	710.0	5.75	9.9
	HOT START	5.47	90.7	673.3	7.04	10.7
THIRD TEST	HOT TRANS	4.45	54.1	601.9	8.19	12.7
A/C-OFF SIM-OFF	HOT STAB	5.17	67.3	682.9	5.50	11.0
	HOT START	4.82	60.9	643.5	6.81	11.8
FOURTH TEST	HOT TRANS	4.5	59.6	613.7	8.39	12.3
A/C-OF SIM-ON	HOT STAB	5.15	73.2	685.7	6.06	10.9
	HOT START	4.86	66.0	650.7	7.20	11.5
14 69 PONT CATA 400	HOT TRANS	3.17	29.3	58 .7	8.38	13.8
A/C-OFF SIM-ON	HOT STAB	3.73	36.2	648.4	6.65	12.4
	HOT START	3.46	32.8	619.4	7.49	13.0
SECOND TEST	HOT TRANS	3.99	51.2	627.2	9.40	12.3
A/C-ON SIM-OFF	HOT STAB	3.76	37.2	695.0	8.71	1 .6
	HOT START	3.87	4 .0	662.0	9.05	1 .9
THIRD TEST	HOT TRANS	2.96	32.3	573.1	8.19	14.0
A/C-OFF SIM-OFF	HOT STAB	3.50	35.6	639.5	6.77	12.6
	HOT START	3.24	34.0	607.2	7.46	13.2
FOURTH TEST	HOT TRANS	3.50	33.0	57 .6	8.57	13.9
A/C-OFF SIM-ON	HOT STAB	3.46	33.5	637.3	6.69	12.7
	HOT START	3.47	33.3	608.2	7.60	13.2

EMISSION RESULTS IN GRAMS PER MILE
FUEL ECON MY IN MILES PER GALLON
FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON:HYDROGEN RATIO

Appendix G - Listing of Loaded Vehicle Test Results on Individual Vehicles

Legend

The heading of each test contains five items describing the vehicle tested, they are:

- Vehicle Number
- Model Year
- Vehicle Make
- Vehicle Model
- Engine Displacement in Cubic Inches

Each vehicle was subjected to three tests, each using the modal emissions testing procedure. The first test was conducted with the normal inertia weight and road load horsepower. The second test was conducted with an increased inertia weight to simulate a vehicle with additional passengers and baggage. The third test was conducted with additional inertia and additional road load horsepower to simulate the conditions a vehicle would experience while towing a trailer. Appendix G is divided into three tests for each vehicle. Above the results for each test is listed the inertia weight and the road load horsepower at which the test was conducted.

IWT - Inertia Weight in pounds

RLHP - Road Load Horsepower

MODE NO. - Lists the Individual Modes of the Test
1 thru 32- Modes of the Surveillance Driving Sequence (SDS), listed on the following page
SUM - a composite of the SDS and the Steady States
BAG - Results of the entire SDS as measured using the CVS (should closely match SUM)
33 - Idle mode
34 - 5 MPH Steady State
35 - 10 MPH Steady State
36 - 15 MPH Steady State
37 - 30 MPH Steady State
38 - 45 MPH Steady State
39 - 60 MPH Steady State

Appendix G (cont)

HC - Hydrocarbon Emissions in grams per mile

CO - Carbon Monoxide Emissions in grams per mile

CO_2 - Carbon Dioxide Emissions in grams per mile

NOX - Oxides of Nitrogen Emissions in grams per mile

FUEL ECON - Fuel Economy in miles per gallon, Calculated Using the Carbon Balance Method.

SURVEILLANCE DRIVING SEQUENCE

Mode						
No	Type	Speed Range (mph)	Time in Mode (sec)	Average Speed (mph)	Average Acceleration Rate (mph/sec)	Distance (miles)
1	Accel	0-30	12	18.05	2.50	0.0602
2	Decel	30-0	16	16.66	-1.88	0.0741
3	Accel	0-15	8	9.04	1.88	0.0201
4	Accel	15-30	11	23.07	1.36	0.0705
5	Accel	30-45	13	37.65	1.15	0.1360
6	Decel	45-30	12	38.05	-1.25	0.1268
7	Accel	30-60	17	45.80	1.76	0.2163
8	Decel	60-45	12	51.48	-1.25	0.1716
9	Accel	45-60	14	52.54	1.07	0.2043
10	Decel	60-15	30	40.40	-1.50	0.3367
11	Accel	15-60	26	43.42	1.73	0.3136
12	Decel	60-0	21	33.83	-2.86	0.1973
13	Accel	0-60	32	37.27	1.88	0.3313
14	Decel	60-30	23	46.86	-1.30	0.2994
15	Decel	30-15	9	23.18	-1.67	0.0579
16	Decel	15-0	8	7.81	-1.88	0.0173
17	Accel	0-45	22	28.85	2.05	0.1759
18	Decel	45-15	16	31.33	-1.88	0.1392
19	Accel	15-45	18	30.55	1.67	0.1528
20	Decel	45-0	19	24.72	-2.37	0.1304
21	Accel	0-60	25	38.28	2.40	0.2654
22	Decel	60-0	28	33.88	-2.14	0.2634
23	Accel	0-30	15	17.73	2.00	0.0737
24	Accel	30-60	25	45.14	1.20	0.3134
25	Decel	60-30	18	47.23	-1.67	0.2362
26	Decel	30-0	10	15.99	-3.00	0.0444
27	Accel	0-60	38	38.01	1.58	0.4009
28	Decel	60-0	35	33.87	-1.71	0.3293
29	Accel	0-30	18	17.73	1.67	0.0886
30	Accel	30-60	21	44.55	1.43	0.2599
31	Decel	60-30	14	46.63	-2.14	0.1813
32	Decel	30-0	13	16.40	-2.31	0.0592

APPENDIX C

LISTING OF LOADED VEHICLE TEST RESULTS ON

VEHICLE 020 1973 CHEV CHEV 350

DETROIT

MODE NO.	---- IWT=4000, RLHP=12.0 ----					---- IWT=4500, RLHP=12.0 ----					---- IWT=5000, RLHP=27.4 ----				
	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON
1	1.87	73.1	688.2	3.84	11.0	2.31	27.8	690.3	5.13	12.0	3.32	157.9	740.0	3.46	8.9
2	2.04	44.7	760.0	2.53	10.6	2.25	22.8	887.8	3.50	10.0	2.93	63.7	801.6	2.60	9.7
3	3.63	80.9	1260.8	3.11	6.3	3.95	39.7	1278.1	4.23	6.6	4.37	76.0	1288.7	3.56	6.2
4	1.63	26.4	613.5	2.66	13.4	1.73	9.4	604.5	3.14	14.2	1.97	16.5	649.9	3.58	13.0
5	1.43	18.9	530.6	4.62	15.6	1.68	12.2	543.5	5.05	15.6	2.11	74.5	593.7	3.26	12.4
6	1.14	12.5	478.6	2.46	17.7	1.23	6.6	527.4	2.91	16.5	1.60	25.2	560.7	3.44	14.7
7	2.28	182.7	526.7	2.96	10.8	2.16	109.4	556.6	4.44	12.0	3.19	162.8	691.5	5.32	9.3
8	1.56	46.7	509.8	3.38	15.0	1.69	40.0	548.7	3.52	14.4	2.27	85.0	678.1	6.84	11.8
9	1.97	117.6	519.9	3.87	12.5	2.07	80.2	521.2	4.10	13.6	2.84	177.5	688.3	6.44	9.1
10	1.55	36.1	566.6	3.66	13.7	1.65	25.8	619.5	3.86	13.4	2.28	67.3	765.6	7.60	10.1
11	2.59	177.6	596.2	3.75	11.0	2.59	128.1	597.7	5.14	11.0	3.56	288.7	756.9	3.94	7.5
12	2.07	56.4	719.5	5.09	10.9	2.29	39.5	761.0	5.59	10.7	3.04	125.9	901.5	7.53	8.0
13	3.00	189.0	688.9	4.48	8.9	3.76	153.8	681.0	5.02	9.5	4.30	258.9	855.6	5.13	7.0
14	1.60	44.3	531.3	3.52	14.6	1.36	33.9	569.0	3.44	14.2	2.26	83.5	682.2	6.06	11.8
15	2.33	38.0	667.2	2.13	12.2	1.91	23.5	667.7	2.09	12.5	2.59	62.2	781.8	3.13	10.2
16	2.66	88.8	1580.4	1.88	5.1	4.04	48.7	1416.0	3.36	5.9	5.29	107.0	1645.4	5.04	4.6
17	2.36	78.6	623.4	4.19	11.4	2.37	86.8	622.9	5.28	11.6	3.32	228.3	675.2	4.72	8.5
18	1.71	35.1	606.6	3.28	13.3	1.68	25.9	560.9	3.18	14.2	2.87	74.2	713.9	4.76	10.6
19	1.97	46.8	624.0	4.41	12.6	2.03	65.3	575.9	4.94	13.0	2.82	168.7	662.4	4.61	9.5
20	1.90	37.3	728.9	3.79	11.2	2.14	38.7	731.0	3.91	11.1	3.18	87.8	965.0	4.07	8.4
21	3.45	212.9	662.3	2.95	9.0	2.87	160.9	690.2	5.03	9.3	3.77	227.2	832.6	5.16	7.4
22	2.39	88.1	691.6	3.95	10.6	1.91	59.6	714.2	4.13	10.9	3.15	130.6	884.5	6.78	8.0
23	3.26	70.7	966.3	5.80	8.2	3.42	44.7	965.4	6.49	8.5	3.63	82.7	1079.4	8.19	7.3
24	2.22	89.7	509.9	3.88	13.5	2.09	94.4	545.3	4.28	12.7	1.67	194.5	620.7	4.88	11.4
25	1.63	51.8	525.6	3.75	14.5	1.48	41.3	546.4	3.75	14.4	1.52	49.1	706.9	5.97	10.2
26	2.96	61.1	944.7	3.96	8.5	2.65	44.3	927.7	3.02	8.8	3.70	87.5	1128.5	5.04	6.9
27	2.48	107.0	682.3	5.11	11.4	2.78	130.7	674.0	5.03	10.0	4.22	259.8	748.9	3.58	7.6
28	1.69	41.4	634.7	4.04	12.6	1.71	32.6	636.4	4.13	12.8	2.67	92.1	812.1	6.51	9.2
29	2.62	63.9	852.1	6.53	8.9	2.59	23.7	916.1	6.42	9.2	3.03	66.2	1025.4	7.10	7.8
30	2.20	90.6	524.1	4.38	13.2	2.29	139.6	565.0	4.54	11.2	3.28	225.2	604.5	4.27	9.2
31	1.66	63.4	541.6	3.47	13.7	1.53	37.8	570.4	3.97	14.0	2.66	105.5	737.3	5.89	9.7
32	3.02	73.0	924.9	3.31	8.5	2.86	34.4	986.3	3.74	8.5	4.17	102.2	1161.0	5.40	6.6
SUM	1.63	56.8	573.2	3.64	13.3	1.64	45.7	593.6	3.93	13.2	2.40	91.5	727.6	5.99	10.1
HAG	2.02	85.0	623.4	4.04	11.6	2.01	63.6	656.2	4.49	11.6	2.91	141.9	781.3	5.27	8.8
33	0.44	6.0	134.5	0.07	61.1	0.45	2.6	136.8	0.08	62.5	0.42	8.9	138.6	0.08	57.7
34	4.30	61.5	1613.6	0.53	5.1	3.91	34.1	1601.3	0.63	5.2	4.05	74.4	1629.3	1.53	5.0
35	1.49	29.2	882.1	1.05	9.5	1.23	14.4	861.2	0.90	10.2	1.42	31.4	918.1	0.76	9.1
36	0.90	18.0	558.3	0.58	15.1	0.83	10.9	551.7	0.63	15.5	0.97	17.8	582.0	0.68	14.5
37	1.06	15.0	387.0	0.35	21.4	1.13	7.3	417.0	0.49	20.5	1.30	5.1	496.4	1.09	17.5
38	0.75	8.3	436.9	2.19	19.6	0.86	4.3	486.8	2.40	19.5	1.27	3.8	588.8	6.02	14.8
39	0.53	6.6	497.3	5.30	17.4	0.59	4.4	511.6	5.27	17.1	1.61	10.6	714.9	10.72	12.6

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX G,CONT'D

LISTING OF LOADED VEHICLE TEST RESULTS ON

VEHICLE 022 1973 CHEV MONT 350

DETROIT

MODE NO.	---- IWT=4000, RLHP=13,2 ----					---- IWT=4500, RLHP=13,2 ----					---- IWT=5000, RLHP=27,1 ----				
	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON
1	3,04	74,6	526,8	1,80	13,6	2,81	63,1	541,5	1,94	13,7	2,96	89,4	633,4	2,19	11,3
2	3,19	96,8	680,3	1,52	10,5	2,89	65,1	721,9	2,40	10,7	2,78	105,3	740,6	1,95	9,7
3	4,27	119,9	988,3	1,34	7,5	5,00	88,0	1023,4	2,08	7,5	4,41	135,2	1113,4	3,03	6,6
4	2,36	71,2	517,7	1,27	13,9	2,46	60,9	558,7	2,20	13,4	2,57	71,2	635,4	2,24	11,7
5	1,69	43,6	468,9	2,42	16,4	1,69	29,2	504,7	3,35	16,0	1,85	50,4	598,2	2,93	13,0
6	1,22	29,2	464,2	1,55	17,3	3,43	26,7	506,4	2,57	15,9	1,67	37,6	618,0	2,94	13,0
7	1,72	69,9	496,7	1,77	14,5	1,61	51,4	529,1	2,59	14,4	2,44	124,1	640,1	2,43	10,5
8	1,35	67,9	518,9	1,95	14,1	1,48	80,0	579,8	2,62	12,5	2,05	117,8	726,9	4,35	9,7
9	1,63	64,8	492,1	2,51	15,6	1,86	49,0	533,4	2,81	14,4	2,42	101,6	703,4	3,47	10,2
10	1,36	36,8	571,7	2,46	14,0	1,60	45,2	604,5	3,10	13,0	2,00	91,0	812,2	4,59	9,2
11	1,92	97,2	551,3	2,15	12,5	2,24	79,5	603,9	2,50	12,1	3,09	146,4	785,4	1,87	8,7
12	1,80	62,0	705,7	3,09	11,0	2,12	74,8	752,0	4,02	10,1	2,45	150,4	985,9	5,19	7,2
13	2,26	94,2	629,1	2,64	11,3	2,59	82,1	716,9	3,37	10,4	2,69	154,2	970,6	2,91	7,3
14	1,17	47,8	534,9	1,90	14,5	2,90	57,7	568,7	2,76	13,3	1,74	102,2	734,2	1,70	9,9
15	2,44	54,0	846,1	1,09	9,5	2,27	49,8	450,0	1,60	16,6	2,32	77,0	736,2	1,88	10,3
16	6,94	167,8	1214,7	1,69	5,9	5,34	121,6	1308,6	2,15	5,9	6,22	185,4	1523,7	2,34	4,8
17	1,82	73,3	554,5	2,76	13,1	1,90	68,4	580,1	2,14	12,8	2,36	106,1	680,3	2,04	10,4
18	1,37	42,6	565,9	2,50	13,9	1,46	53,3	634,9	2,02	12,3	1,72	83,5	752,8	2,59	10,6
19	1,52	49,6	539,2	2,75	14,3	1,74	54,2	572,1	1,84	13,4	2,29	86,5	600,8	1,89	10,8
20	1,67	49,5	685,5	2,38	11,5	1,94	77,9	737,0	1,95	10,3	2,34	100,0	866,3	2,87	8,6
21	1,91	126,1	604,4	2,09	11,0	2,55	147,5	673,0	1,73	9,7	3,46	197,6	744,2	1,75	8,3
22	1,62	69,1	677,9	2,42	11,2	2,14	105,1	719,7	2,56	10,0	3,04	145,1	922,5	4,13	7,6
23	2,62	77,0	972,3	2,98	8,1	3,27	93,7	889,0	4,11	8,5	2,40	132,3	1061,5	4,87	7,0
24	1,37	52,5	504,1	2,74	15,0	1,61	48,4	544,8	3,36	14,2	2,09	96,6	620,6	2,16	11,4
25	1,00	40,4	533,7	2,23	14,8	1,25	50,5	579,4	3,15	13,4	1,87	106,0	728,4	3,43	9,9
26	3,56	70,4	855,3	1,78	9,1	3,85	80,9	856,9	2,37	8,9	4,43	133,9	1058,6	2,66	6,9
27	1,85	85,0	617,4	3,26	11,7	1,87	80,4	673,5	3,19	11,0	2,34	130,2	737,4	2,54	9,3
28	1,32	39,4	622,7	2,03	12,9	1,45	49,7	647,5	3,02	12,2	1,69	81,5	835,4	3,95	9,2
29	2,57	61,2	763,4	2,75	10,5	2,55	59,6	804,8	3,29	9,8	2,73	85,6	903,4	3,89	8,5
30	1,39	60,3	535,7	2,00	14,0	1,49	54,8	570,9	2,88	13,4	3,02	115,2	651,5	2,03	10,5
31	1,12	53,0	539,2	1,78	14,2	1,29	72,5	587,1	2,62	12,6	2,02	115,5	796,0	3,61	9,0
32	5,13	98,4	1232,5	6,43	6,3	3,09	83,1	866,1	2,10	8,8	4,03	138,4	1096,5	2,91	6,7
SUM	1,47	48,7	508,5	2,55	13,1	1,65	51,4	591,4	2,81	13,1	1,84	77,1	713,7	3,62	10,6
AAG	1,86	71,7	595,0	2,19	12,4	1,85	81,3	651,0	2,74	11,3	2,39	138,3	769,2	3,07	8,9
33	0,44	13,5	96,3	0,04	74,7	0,52	14,3	84,5	0,34	81,7	0,50	14,9	48,2	0,04	121
34	3,98	165,5	1207,6	0,38	6,1	4,21	151,8	1027,2	0,44	6,9	3,87	49,0	621,6	0,34	10,2
35	1,42	89,5	1025,3	0,35	7,6	2,28	89,5	653,2	0,29	11,1	1,39	83,1	882,0	0,34	8,7
36	1,14	72,1	724,7	0,28	10,5	1,33	65,2	605,5	0,29	12,5	0,97	69,5	611,4	0,32	12,3
37	1,23	33,2	516,6	1,18	15,5	1,14	33,7	405,8	1,09	19,2	0,78	14,2	534,3	0,91	15,9
38	0,95	12,1	564,4	2,36	15,1	0,92	10,9	458,0	1,95	18,6	0,39	10,8	699,0	3,74	12,4
39	0,74	10,2	577,9	4,06	14,9	0,73	16,4	560,6	4,39	15,1	1,00	15,9	611,4	6,89	13,9

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1,85 CARBON TO HYDROGEN RATIO

APPENDIX G.CONT'D

LISTING OF LOADED VEHICLE TEST RESULTS ON

VEHICLE 033 1973 FORD STAW 400

DETROIT

MODE NO.	---- IW=5000, RLHP=14.7 ----					---- IW=5500, RLHP=14.7 ----					---- IW=6000, RLHP=29.4 ----				
	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON
1	6.33	23.0	490.2	4.50	16.2	4.84	5.9	549.5	5.75	15.5	4.84	61.6	583.6	3.20	12.8
2	3.67	16.3	878.7	3.72	9.7	3.57	11.2	915.5	3.01	9.4	3.86	57.6	894.9	3.34	8.9
3	9.04	25.6	1074.3	4.28	7.8	8.09	22.1	1142.7	3.19	7.4	7.71	83.5	1331.7	3.47	6.0
4	3.02	18.9	752.7	4.36	11.2	2.90	20.9	768.8	3.84	10.9	2.63	31.6	831.7	4.22	10.0
5	1.64	7.2	647.9	5.07	13.4	1.69	14.3	683.2	5.13	12.5	1.96	23.3	826.2	7.48	10.2
6	2.28	1.8	611.9	2.86	14.3	1.37	8.1	646.4	2.44	13.3	1.66	11.6	759.7	4.56	11.3
7	3.84	66.8	617.2	6.57	12.0	3.21	70.3	653.6	7.49	11.5	3.54	108.0	436.6	7.54	14.4
8	2.67	47.8	697.6	6.93	11.4	2.20	51.1	694.3	6.31	11.0	3.02	92.2	840.2	11.54	8.9
9	2.78	43.5	670.4	7.85	11.9	2.67	28.3	681.8	9.08	12.1	3.64	113.4	850.4	8.80	8.5
10	2.68	17.5	674.6	7.89	12.5	2.18	15.3	697.5	7.51	12.2	2.95	58.7	901.7	14.35	8.8
11	3.82	79.4	686.5	8.51	10.8	3.97	93.4	709.9	9.68	10.2	4.57	199.9	835.5	8.59	7.6
12	2.95	28.9	848.8	8.97	9.8	2.92	37.4	909.2	8.77	9.1	3.63	108.8	1056.6	9.80	7.2
13	4.03	62.5	786.0	9.78	9.9	4.55	83.6	801.3	10.38	9.4	4.86	151.7	891.2	9.49	7.8
14	2.26	19.1	640.8	6.31	13.1	2.31	27.3	638.9	6.48	12.9	2.56	73.7	858.4	7.59	9.0
15	4.79	13.5	589.0	3.58	14.2	5.85	18.5	634.3	3.48	13.0	5.16	42.1	793.8	5.16	10.1
16	9.84	37.6	1062.8	4.98	7.8	12.03	39.5	1200.2	5.14	6.8	10.13	69.0	1415.2	5.86	5.7
17	3.59	40.5	633.2	7.17	12.5	3.10	25.8	679.0	7.24	12.2	3.24	67.9	692.5	7.04	11.0
18	2.20	21.2	810.8	3.80	10.4	2.07	13.7	803.3	3.54	10.7	2.70	34.1	922.7	4.92	8.9
19	3.66	33.4	585.6	5.75	13.7	3.30	26.1	628.5	6.72	13.1	3.39	59.3	676.8	5.80	11.4
20	3.34	26.9	950.6	3.46	8.8	3.05	28.4	969.7	4.41	8.7	3.47	60.3	1093.2	5.37	7.4
21	4.99	128.6	726.5	7.67	9.4	4.85	163.4	791.1	7.57	8.3	4.93	180.4	859.2	9.36	7.7
22	3.40	66.1	758.1	5.64	10.2	3.45	71.3	815.0	7.92	9.5	3.86	107.8	1034.8	4.58	7.3
23	6.46	50.5	915.3	6.44	8.7	7.74	52.0	950.4	8.11	8.4	7.13	88.4	1119.2	6.82	6.9
24	2.31	15.6	675.3	8.58	12.6	2.43	30.2	691.3	8.93	11.9	2.93	82.2	754.5	7.52	9.9
25	2.35	12.7	660.8	8.30	12.9	1.66	20.9	654.1	7.09	12.8	2.25	57.9	844.7	13.11	9.4
26	5.49	20.9	881.0	6.15	9.5	8.12	26.0	855.9	5.04	9.6	6.55	53.3	1146.0	10.02	7.1
27	3.17	52.1	765.6	9.13	10.3	3.53	66.6	778.6	9.38	9.9	3.86	112.0	866.6	10.88	8.4
28	2.72	14.1	720.4	7.68	11.8	2.99	20.7	709.4	6.87	11.8	3.12	57.3	907.7	8.56	8.8
29	5.78	22.3	877.2	6.13	9.5	7.13	26.5	905.0	6.55	9.2	5.86	41.9	966.4	6.58	8.4
30	2.55	28.6	669.1	8.23	12.3	2.59	37.5	703.6	10.09	11.5	3.08	95.5	743.8	8.17	9.8
31	2.56	23.7	714.6	8.41	11.7	2.10	31.9	696.5	6.90	11.8	2.44	75.1	899.4	7.00	8.7
32	6.14	27.9	971.8	6.79	8.6	7.69	37.7	982.2	5.53	8.3	6.58	66.2	1084.9	5.32	7.3
SUM	2.64	26.6	677.1	8.12	12.2	2.72	30.6	677.4	8.38	12.1	2.49	56.5	811.4	8.96	9.8
AVG	3.29	41.6	752.7	6.66	10.7	3.31	45.1	768.4	7.04	10.4	3.69	95.8	913.2	8.16	8.3
33	1.33	1.0	67.7	0.03	120	0.71	3.8	74.5	0.04	107	0.91	2.2	68.7	0.04	118
34	4.56	9.5	1405.5	0.69	6.2	6.02	25.3	1148.9	0.53	7.3	6.02	22.3	1168.5	2.33	7.3
35	1.94	4.7	831.5	0.72	10.5	1.94	3.8	800.4	0.56	10.9	2.03	4.1	790.4	0.72	11.0
36	1.43	9.9	673.9	0.87	12.8	1.41	9.6	616.8	0.69	13.9	1.52	9.1	640.6	0.87	13.5
37	0.93	4.2	541.2	2.82	16.1	2.37	2.5	467.2	3.66	18.5	2.06	2.7	543.9	6.91	16.0
38	1.14	3.5	543.7	3.27	16.1	1.28	3.5	543.5	4.17	16.0	1.83	7.0	672.4	5.17	12.9
39	1.37	11.4	628.2	15.94	13.6	1.48	10.5	604.6	15.73	14.2	1.20	5.8	837.0	13.17	10.4

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX G,CONT'D

LISTING OF LOADED VEHICLE TEST RESULTS ON

VEHICLE 034 1973 FORD LTD 400

DETROIT

MODE	---- IHT=4500, RLHP=14,0 ----					---- IHT=5000, RLHP=14,0 ----					---- IHT=5500, RLHP=28,3 ----				
NO.	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON
1	5,45	164,9	579,6	3,58	10,4	4,64	138,1	615,4	3,60	12,5	4,41	141,0	610,5	4,02	10,5
2	4,51	75,2	746,5	3,21	10,1	3,96	57,7	824,0	3,51	9,6	4,20	60,7	833,5	5,69	9,4
3	9,12	246,0	1003,4	4,13	6,3	8,18	190,7	1085,8	3,68	6,1	9,56	208,9	1134,2	4,80	6,0
4	3,87	92,1	779,5	3,15	9,5	3,02	67,5	714,0	2,62	10,1	3,27	60,0	752,3	2,80	10,4
5	1,96	23,8	588,8	4,29	14,0	1,87	15,8	603,3	5,17	14,0	2,52	13,8	671,4	7,10	12,7
6	1,85	9,0	532,6	4,11	16,1	1,93	7,8	544,9	5,04	15,8	2,15	7,7	681,5	4,46	12,7
7	2,32	29,5	610,7	7,32	13,4	2,36	30,0	624,4	6,87	13,1	2,80	39,7	694,8	7,78	11,6
8	2,13	26,1	614,7	7,31	13,3	2,25	44,5	658,2	6,14	12,1	2,84	75,0	844,8	6,77	9,1
9	2,45	14,7	612,3	7,80	13,8	2,61	21,4	634,9	6,26	13,1	3,29	44,9	764,3	6,66	10,5
10	2,73	11,4	639,1	8,49	13,3	2,69	15,0	665,4	7,59	12,7	3,23	47,4	881,3	6,42	9,2
11	3,41	69,0	657,6	7,44	11,4	3,65	60,7	677,5	6,69	10,9	4,14	117,7	797,1	7,25	9,4
12	3,57	29,3	793,0	8,63	10,4	3,70	44,0	826,8	9,64	9,8	4,30	88,6	1100,7	8,89	7,1
13	3,92	50,6	775,9	8,94	10,2	4,26	60,4	822,9	9,67	9,5	5,08	125,1	908,3	7,96	7,9
14	2,21	14,2	612,4	5,90	13,8	2,63	21,4	632,5	8,33	13,2	3,09	63,3	809,5	6,28	9,7
15	4,70	38,1	620,5	3,49	12,8	6,01	49,2	633,9	4,79	12,2	6,15	61,0	782,8	4,79	9,9
16	11,21	209,5	1100,2	4,15	6,1	13,07	214,3	1107,0	5,70	6,0	14,36	250,0	1295,2	5,70	5,1
17	3,25	76,3	631,8	4,63	11,6	3,55	78,7	657,0	5,15	11,2	3,99	91,0	683,9	4,38	10,6
18	2,48	18,2	662,1	6,25	12,7	2,76	22,4	685,9	6,51	12,2	3,34	36,2	841,4	5,41	9,8
19	2,96	55,2	575,6	4,95	13,2	3,42	62,4	612,2	5,55	12,3	3,86	71,1	639,8	4,79	11,6
20	3,16	23,6	806,4	6,78	10,4	3,52	28,4	833,5	6,41	10,0	4,60	73,0	997,7	5,11	7,9
21	3,47	96,5	747,2	6,74	9,8	4,33	123,7	769,8	6,55	9,1	5,16	219,0	665,4	6,31	8,7
22	3,65	44,0	741,5	4,41	10,8	4,26	72,4	751,7	4,48	10,1	4,72	238,7	412,2	7,27	11,1
23	7,04	121,0	939,1	3,99	7,7	7,83	132,9	938,7	6,45	7,6	7,96	295,2	530,7	7,42	8,7
24	2,15	12,6	626,3	7,72	13,6	2,42	19,8	645,4	7,09	13,0	3,07	177,7	136,5	7,18	21,0
25	1,87	6,7	596,8	4,32	14,5	2,19	12,0	632,1	6,45	13,5	2,91	196,3	196,3	6,15	17,3
26	6,76	64,2	859,8	4,42	9,3	7,39	53,3	922,4	6,12	8,6	8,86	283,1	242,4	6,50	12,4
27	2,66	34,9	721,4	7,97	11,5	3,04	43,2	740,1	8,18	10,9	4,13	211,1	285,6	8,74	14,1
28	3,23	16,0	669,0	3,67	12,6	3,63	21,5	672,9	6,52	12,4	3,88	214,7	169,9	6,97	17,1
29	6,29	110,3	864,6	3,82	8,4	6,65	116,5	889,6	5,41	8,1	6,81	268,4	449,9	6,66	9,9
30	2,39	14,6	632,8	8,84	13,4	2,50	18,2	666,5	8,61	12,6	3,12	175,5	169,0	7,70	19,5
31	2,01	9,9	632,8	4,50	13,6	2,47	20,0	646,8	8,94	12,9	3,00	208,2	276,8	6,43	14,5
32	6,47	37,3	880,4	4,56	9,3	7,55	56,1	872,4	7,14	9,0	8,26	300,4	303,7	6,77	11,1
SUM	2,68	30,8	629,9	7,61	12,9	2,87	35,4	666,2	8,72	12,5	3,20	87,8	636,0	7,02	11,3
RAG	3,06	39,6	686,7	6,00	11,7	3,42	46,2	724,9	7,30	11,0	4,05	87,0	864,4	6,73	8,8
33	0,91	30,7	78,9	0,08	68,3	1,11	33,7	79,8	0,04	65,1	1,02	36,9	75,1	0,12	65,1
34	11,75	391,0	902,3	0,69	5,7	11,78	390,6	951,8	1,06	5,5	13,36	460,0	939,2	1,06	5,2
35	4,53	87,0	851,8	0,77	8,8	4,66	93,6	833,8	0,87	8,9	5,12	125,2	772,6	0,69	9,0
36	2,95	45,8	600,2	0,72	13,0	2,97	40,9	677,3	2,11	11,8	3,12	51,6	608,9	0,79	12,7
37	1,58	2,7	454,8	4,31	19,1	1,54	2,4	449,1	3,51	19,4	1,84	2,9	511,0	6,81	17,0
38	1,49	2,9	492,5	2,57	17,7	1,50	2,9	499,0	9,51	17,5	1,98	4,1	670,8	3,36	13,0
39	1,77	8,1	573,9	15,41	15,0	1,76	7,7	577,2	16,01	14,9	1,46	5,7	762,8	9,67	11,4

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1,85 CARBON TO HYDROGEN RATIO

APPENDIX G,CONT'D

LISTING OF LOADED VEHICLE TEST RESULTS ON

VEHICLE 038 1973 OLDS 98 455

DETROIT

MODE NO.	**** IWT=5000, RLHP=14,7 ****					**** IWT=5500, RLHP=14,7 ****					**** IWT=6000, RLHP=29,4 ****				
	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON
1	9,32	20,3	712,5	10,10	11,5	5,13	23,4	709,1	10,24	11,6	10,45	78,8	751,6	9,67	9,6
2	6,10	10,8	749,8	8,64	11,3	4,46	10,9	801,4	8,64	10,7	7,17	50,7	799,3	8,02	9,8
3	11,40	37,7	1163,7	9,12	7,0	8,81	40,7	1202,8	9,69	6,9	11,82	80,0	1268,9	9,97	6,2
4	4,18	9,0	663,4	9,12	12,8	3,36	10,8	663,4	9,45	12,8	4,20	28,4	731,7	10,66	11,2
5	2,18	2,3	597,1	11,08	14,4	1,91	3,4	597,1	11,94	14,6	2,45	9,2	692,9	14,64	12,4
6	1,87	1,3	524,8	7,86	16,7	1,69	1,6	537,2	8,33	16,3	2,21	5,2	643,2	12,02	13,5
7	2,41	34,6	627,0	11,77	12,9	2,25	57,6	633,4	11,23	12,1	3,27	80,1	737,6	13,50	10,2
8	2,01	19,2	633,7	11,87	13,2	2,05	33,8	649,8	11,82	12,5	2,81	65,0	808,0	15,99	9,1
9	2,34	7,8	635,3	14,33	13,6	2,57	13,2	629,6	14,47	13,5	2,85	29,8	784,1	18,95	10,6
10	2,37	4,8	655,6	12,12	13,2	2,46	6,5	684,0	12,73	12,6	3,06	18,9	1078,2	19,17	7,4
11	2,93	7,2	727,3	17,34	11,9	2,94	10,0	744,5	17,56	11,5	3,71	77,7	850,3	17,50	9,0
12	2,80	4,9	866,4	17,92	10,1	2,93	6,6	901,0	18,79	9,6	3,84	36,0	1075,6	22,83	7,7
13	3,57	9,5	829,5	20,40	10,4	3,15	11,7	887,3	21,76	9,4	4,05	67,0	992,7	21,17	8,0
14	1,99	3,9	637,8	13,20	13,7	1,96	4,4	672,4	13,51	12,9	2,78	31,6	809,4	17,15	10,2
15	5,67	7,2	702,4	8,42	12,1	5,63	10,7	655,4	8,42	12,9	5,14	46,0	779,8	10,29	10,2
16	13,49	40,3	1321,9	10,60	6,2	14,09	40,5	1247,2	10,60	6,5	11,87	122,6	1425,7	13,23	5,4
17	3,32	15,1	631,0	15,54	13,3	3,50	16,1	670,1	14,15	12,6	3,63	57,2	760,8	14,32	10,3
18	2,59	5,8	713,6	11,08	12,1	2,68	5,4	715,8	12,20	12,1	3,30	29,6	840,0	14,60	9,9
19	3,08	10,3	596,3	13,33	14,3	3,34	9,4	517,6	12,34	16,3	3,71	34,4	694,2	13,65	11,7
20	3,32	6,8	835,4	12,62	10,4	3,49	6,8	846,4	13,74	10,2	4,25	28,2	1010,3	17,49	8,3
21	3,19	49,2	776,3	16,57	10,3	3,81	117,6	766,6	13,01	9,2	4,49	197,2	884,1	11,24	7,3
22	3,03	19,6	803,3	14,97	10,5	3,59	41,9	826,8	14,75	9,8	4,80	99,6	1020,0	18,69	7,4
23	6,57	33,7	1000,7	16,91	8,3	7,29	39,1	1000,7	17,06	8,2	7,84	107,4	1164,8	19,19	6,5
24	1,91	4,0	628,4	14,74	13,9	2,14	6,1	664,5	15,60	13,4	2,81	38,4	755,1	16,25	10,8
25	1,70	3,0	662,3	13,77	13,2	1,85	3,6	668,6	14,23	13,1	2,70	27,2	843,1	17,22	9,4
26	4,01	9,6	937,8	12,05	9,1	7,62	11,4	953,6	12,37	8,9	7,34	68,3	1113,4	16,91	7,1
27	2,88	9,0	756,2	19,95	11,4	2,84	10,4	779,2	18,41	11,0	3,64	75,3	869,8	18,13	8,9
28	2,93	4,9	731,8	13,06	11,9	3,11	5,8	744,3	13,80	11,6	4,09	37,9	894,2	16,28	9,2
29	7,27	22,2	881,8	16,60	9,4	7,08	26,1	871,0	14,88	9,5	7,67	111,2	1004,4	15,16	7,4
30	2,22	4,7	643,7	16,84	13,5	2,24	6,2	647,9	16,24	13,4	3,18	74,1	736,4	14,76	10,3
31	1,96	3,6	701,4	13,37	12,4	1,98	3,9	730,5	15,37	11,9	3,12	59,8	866,3	14,47	9,1
32	7,76	10,2	972,7	11,90	8,8	7,36	11,1	988,4	13,45	8,6	7,43	97,0	1154,3	13,14	6,7
SUM	2,57	4,1	656,6	12,30	13,1	2,70	13,0	670,8	12,48	12,7	3,39	39,4	812,6	15,03	10,0
HAG	3,00	13,6	747,9	12,77	11,4	3,06	20,0	755,9	12,68	11,1	3,77	62,0	892,4	14,16	8,9
33	1,65	5,6	99,8	0,16	77,9	1,85	6,0	100,4	0,25	76,8	2,38	7,0	95,5	0,24	77,8
34	22,84	54,8	1211,1	2,32	6,5	24,76	58,1	1204,6	1,95	6,5	36,73	70,9	1152,6	2,32	6,4
35	9,24	19,0	770,6	0,84	10,7	9,75	9,7	804,5	1,05	10,4	10,71	6,1	862,3	1,18	9,8
36	4,92	12,9	531,8	0,77	15,6	6,58	9,3	525,0	0,77	15,8	5,61	5,7	584,1	1,14	14,5
37	1,43	3,2	449,3	2,62	19,3	1,34	3,1	455,8	2,81	19,1	1,49	3,0	528,4	4,74	16,5
38	0,96	2,4	495,7	6,93	17,7	1,21	3,2	526,0	7,61	16,6	1,34	3,5	661,6	13,24	13,2
39	0,89	3,3	593,5	13,94	14,8	1,09	3,1	604,5	14,33	14,4	1,74	12,5	798,0	18,65	10,8

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1,85 CARBON TO HYDROGEN RATIO

APPENDIX G.CONT'D

LISTING OF LOADED VEHICLE TEST RESULTS ON

VEHICLE 040 1973 PLYM FURY 360

DETROIT

MODE NO.	**** IWT=4000, RLHP=13.2 **** HC	CO	CO2	NOX	FUEL ECON	**** IWT=4500, RLHP=13.2 **** HC	CO	CO2	NOX	FUEL ECON	**** IWT=5000, RLHP=27.1 **** HC	CO	CO2	NOX	FUEL ECON
1	9.09	156.7	449.9	1.37	12.2	9.44	164.7	351.2	1.82	13.9	14.44	178.3	404.0	1.38	12.2
2	8.48	216.1	568.0	1.66	9.5	7.90	201.0	668.6	2.21	8.8	11.09	227.5	672.4	2.27	8.3
3	16.75	305.0	837.6	1.95	6.5	16.06	300.1	801.4	2.53	6.7	20.07	319.2	866.9	2.66	6.2
4	6.05	122.1	529.8	3.10	12.0	5.02	120.1	542.7	3.63	11.9	6.55	123.3	558.8	3.15	11.5
5	3.49	69.4	488.6	3.59	14.6	3.37	57.3	467.6	5.18	15.6	4.44	84.4	440.5	3.73	15.1
6	3.38	48.0	447.8	4.05	16.6	3.00	34.1	513.1	4.74	15.9	4.15	79.7	579.2	5.03	12.4
7	4.21	69.7	504.6	3.08	14.1	4.72	69.4	486.5	3.70	14.5	5.71	103.8	575.1	3.83	11.7
8	4.02	113.4	499.0	3.34	12.9	3.95	110.7	559.7	3.95	11.9	5.54	168.0	703.0	3.00	9.0
9	4.26	63.8	517.3	3.46	14.1	4.34	62.4	495.5	4.49	14.6	6.46	112.6	618.6	4.63	10.9
10	4.90	76.5	526.5	3.84	13.4	5.08	74.0	597.6	4.59	12.2	6.91	157.4	747.9	5.57	8.7
11	5.78	147.6	546.6	3.48	11.1	6.26	143.9	505.3	3.10	11.8	7.73	233.0	618.1	2.80	8.8
12	5.93	110.0	679.3	5.30	10.2	6.56	123.6	717.9	5.80	9.5	9.58	264.7	880.6	3.86	6.7
13	6.78	166.1	635.0	3.95	10.1	7.79	171.9	605.2	3.66	9.9	10.28	233.8	723.9	3.85	7.9
14	3.47	81.0	493.2	3.80	14.0	4.99	101.5	539.7	3.78	12.4	6.61	180.2	601.6	4.15	9.8
15	9.09	125.9	481.5	2.05	12.5	9.29	129.6	535.4	2.37	11.5	9.88	173.4	626.0	2.45	9.5
16	23.58	368.8	987.2	2.65	5.5	22.23	339.5	1000.9	3.07	5.5	23.75	395.0	1157.8	3.21	4.8
17	5.73	131.3	520.9	2.73	11.9	6.80	136.4	486.0	2.60	12.3	7.57	206.1	543.1	1.83	10.0
18	5.08	88.5	523.3	4.03	13.1	5.72	111.7	560.3	3.75	11.8	6.98	171.5	619.6	3.69	9.7
19	5.70	102.1	546.8	3.71	12.2	5.97	119.8	534.1	3.19	12.3	6.99	179.3	536.5	2.41	10.6
20	6.03	82.9	668.6	4.83	10.9	6.94	118.0	691.8	4.19	9.9	8.98	203.0	742.6	4.27	8.1
21	6.37	166.0	554.8	3.23	10.7	7.62	166.4	615.4	3.20	9.5	9.01	237.8	621.5	2.82	8.7
22	6.34	126.6	618.1	3.79	10.6	7.05	152.2	580.3	3.77	10.5	9.19	262.8	788.3	4.03	7.2
23	11.47	177.2	759.8	4.55	8.3	13.93	195.3	763.7	4.96	8.0	14.55	256.8	812.6	4.73	6.5
24	3.99	72.7	510.7	3.97	13.9	4.99	88.7	495.3	4.46	13.6	5.91	137.7	561.8	2.94	11.1
25	3.72	64.8	523.1	4.09	13.9	4.45	81.9	530.3	3.71	13.2	6.39	193.1	649.0	3.65	9.1
26	11.59	156.5	749.8	3.10	8.6	13.99	176.7	745.7	3.49	8.4	15.10	263.5	791.3	3.49	7.1
27	5.94	132.1	538.8	3.59	11.6	6.51	145.1	613.8	3.20	10.3	8.17	281.4	689.8	2.18	7.9
28	5.97	96.8	562.8	4.05	12.1	7.05	98.5	556.7	3.91	12.1	8.82	205.2	689.0	3.59	8.5
29	11.17	168.7	689.9	4.48	9.0	11.81	169.4	689.8	4.14	8.8	13.48	236.0	807.6	4.16	7.3
30	4.31	89.5	506.0	3.62	13.4	5.49	124.4	529.5	2.66	12.7	8.40	215.9	580.1	2.41	9.5
31	4.55	121.6	530.0	3.05	12.1	5.23	138.8	532.8	2.93	11.6	6.97	225.0	628.0	2.49	8.9
32	12.59	199.2	767.7	2.78	7.9	13.54	209.8	760.1	3.16	7.8	16.32	286.4	1067.3	2.61	5.7
SUM	4.81	86.5	533.0	4.50	13.0	5.39	95.8	538.5	4.33	12.6	6.38	143.3	662.1	5.10	9.8
BAG	5.92	122.4	567.6	3.67	11.4	6.53	137.2	589.0	3.92	10.8	8.22	223.9	690.4	3.70	8.3
33	1.61	37.0	63.9	0.04	69.8	2.71	38.4	59.3	0.07	69.2	1.51	35.3	66.0	0.07	70.3
34	15.73	483.1	896.1	0.42	5.2	20.14	517.1	871.0	0.47	5.1	15.27	460.2	908.6	0.52	5.3
35	6.16	250.1	635.6	0.34	8.7	7.55	252.8	666.7	0.44	8.2	5.93	230.1	683.4	0.47	8.3
36	3.96	153.5	519.5	0.33	11.5	4.05	156.2	519.3	0.35	11.4	4.12	136.6	576.0	0.45	11.1
37	3.42	61.3	383.4	1.40	18.1	3.50	66.8	382.0	1.17	17.8	3.88	44.6	475.6	4.33	15.9
38	2.52	5.5	452.1	8.73	18.9	2.52	8.2	459.8	8.21	18.5	2.77	6.7	592.0	11.89	14.5
39	2.73	24.4	529.7	7.27	15.4	2.88	32.7	521.9	6.34	15.2	3.55	62.5	744.6	7.97	10.4

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX G,CONT'D

LISTING OF LOADED VEHICLE TEST RESULTS ON

VEHICLE 052 1972 CHEV IMPA 350

DETROIT

MODE	---- IWT=4500, RLHP=14.0 ----					---- IWT=5000, RLHP=14.0 ----					---- IWT=5500, RLHP=20.3 ----				
NO.	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON
1	4.65	59.0	696.7	5.86	11.0	3.88	40.1	556.3	5.25	14.1	3.86	89.7	628.7	5.48	11.4
2	4.16	38.5	782.7	3.99	10.4	3.69	46.7	842.1	4.42	9.6	3.67	54.9	824.0	5.14	9.6
3	5.98	47.2	1110.7	4.12	7.4	5.66	77.0	1065.8	4.68	7.4	6.11	95.1	1156.8	5.36	6.7
4	2.64	16.7	636.0	5.41	13.2	2.26	27.8	565.4	3.58	14.4	2.17	27.9	663.2	4.50	12.1
5	4.04	6.7	572.1	4.98	14.9	1.43	16.3	533.8	5.30	15.7	1.81	25.0	634.8	6.27	13.1
6	4.07	11.6	514.6	4.98	16.3	1.79	15.1	530.3	5.73	15.9	1.90	24.1	622.9	10.35	13.3
7	1.98	26.7	552.6	4.80	14.7	2.48	47.4	459.7	1.14	16.4	3.03	115.3	650.3	6.19	10.6
8	1.98	63.9	588.5	3.94	12.8	2.14	60.7	665.1	4.29	11.6	3.06	92.6	775.9	8.21	9.5
9	2.42	38.3	535.0	6.30	14.7	2.60	36.2	491.0	5.74	16.0	3.52	103.2	668.1	7.65	10.5
10	2.56	37.3	582.9	5.89	13.7	2.75	41.8	656.1	6.56	12.1	3.08	66.2	851.7	9.62	9.2
11	2.47	42.2	612.4	7.48	12.9	3.93	69.0	530.9	4.88	13.6	3.61	147.5	649.0	5.04	9.9
12	2.61	50.8	758.6	6.80	10.5	3.73	72.2	864.9	6.89	9.0	4.76	122.0	997.3	10.62	7.4
13	2.60	53.7	725.0	8.25	10.9	3.53	73.7	692.1	7.09	10.8	4.53	164.1	633.9	6.96	9.6
14	1.88	40.9	575.1	5.12	13.6	2.44	51.5	593.2	4.91	13.0	3.02	78.1	763.7	7.71	9.9
15	2.52	32.4	595.6	3.74	13.6	3.83	37.1	595.4	4.35	13.3	1.91	49.6	663.4	5.36	11.6
16	6.73	117.5	1142.4	4.79	6.6	6.33	94.7	1149.9	4.40	6.7	6.19	136.4	1298.9	10.11	5.8
17	2.14	50.5	599.3	6.59	12.9	2.61	40.8	560.7	7.29	14.0	3.13	79.4	652.0	7.08	11.3
18	1.94	32.7	653.0	4.77	12.5	2.02	24.8	718.3	5.41	11.6	2.31	49.1	776.7	6.06	10.3
19	1.96	36.2	596.9	5.81	13.4	2.09	31.3	592.3	7.09	13.7	2.62	52.6	660.6	7.24	11.8
20	2.46	40.9	789.6	5.22	10.3	2.42	37.6	846.7	5.39	9.7	3.06	62.2	908.4	7.47	8.7
21	3.20	125.1	673.4	4.12	10.1	3.51	138.9	616.0	4.56	10.5	4.80	214.1	857.0	5.65	7.3
22	2.41	92.7	712.0	4.56	10.2	3.75	90.1	776.4	5.09	9.5	4.66	140.4	905.6	5.57	7.8
23	3.73	86.8	927.4	6.21	8.3	5.36	92.4	887.0	6.16	8.5	5.54	115.6	1065.3	6.73	7.0
24	1.99	39.9	590.8	5.76	13.4	2.10	45.3	587.4	5.34	13.3	3.29	134.1	606.5	5.08	10.7
25	2.07	44.4	562.9	6.02	13.9	2.24	49.3	502.7	6.06	15.1	2.99	102.6	751.1	7.31	9.6
26	3.97	59.8	831.9	5.24	9.5	4.16	63.2	862.8	6.31	9.1	4.95	97.9	1059.2	7.95	7.2
27	2.50	59.4	666.3	6.23	11.5	3.24	95.6	656.8	6.13	10.9	3.45	159.8	759.2	5.74	8.7
28	2.28	40.0	652.3	5.72	12.3	2.54	45.4	676.5	6.25	11.7	3.75	100.6	842.8	8.40	8.8
29	3.24	71.0	864.0	7.23	9.0	3.18	51.6	899.9	6.94	9.0	4.22	86.0	1018.4	8.94	7.6
30	2.36	45.2	613.0	6.09	12.8	2.97	80.1	578.9	4.10	12.4	3.33	153.2	673.5	4.48	9.6
31	2.39	72.1	587.3	5.89	12.5	2.47	81.7	616.5	6.47	11.6	3.36	109.3	797.5	7.25	9.1
32	4.44	95.4	887.4	5.54	8.4	4.27	82.7	898.7	5.47	8.5	5.19	127.3	770.1	7.14	9.0
SUM	2.13	33.7	594.1	5.63	13.6	2.27	39.1	585.9	5.57	13.6	2.43	71.5	809.6	6.57	9.5
HAG	2.52	56.5	650.3	5.40	11.8	2.90	70.1	673.5	5.32	11.2	3.68	118.7	797.0	6.27	8.9
33	0.60	7.7	93.1	0.11	82.9	0.52	6.8	91.5	0.10	85.4	0.60	12.5	113.8	0.30	65.6
34	6.57	114.9	1110.6	0.88	6.8	5.32	93.0	1110.6	0.96	7.0	5.55	86.3	1130.8	1.06	6.9
35	2.24	25.2	916.8	1.05	9.2	2.75	48.7	613.4	0.51	12.7	1.57	19.1	978.1	1.29	8.8
36	1.67	15.2	599.6	0.80	14.1	1.49	16.3	581.1	0.76	14.5	1.23	10.1	619.1	0.68	13.9
37	1.14	2.6	395.9	2.42	21.9	1.20	2.5	376.6	2.29	23.0	0.65	12.8	644.7	1.85	13.3
38	1.79	10.9	434.8	4.93	19.4	1.58	7.8	435.7	5.56	19.6	0.11	3.9	787.3	4.44	11.2
39	0.89	5.2	538.9	7.21	16.1	0.91	5.1	519.5	7.83	16.7	0.79	11.2	966.4	9.17	9.0

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX G,CONT'D

LISTING OF LOADED VEHICLE TEST RESULTS ON

VEHICLE 854 1972 CHEV CAPR 400

DETROIT

MODE	---- IWT=4500, RLHP=14.0 ----					---- IWT=5000, RLHP=14.0 ----					---- IWT=5500, RLHP=28.3 ----				
NO.	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON
1	4.22	72.8	592.1	5.15	12.3	3.50	65.8	567.6	3.63	13.0	3.94	75.9	638.6	5.67	11.5
2	3.04	52.5	775.5	3.88	10.2	2.72	47.5	777.3	3.57	10.3	3.13	50.0	835.2	4.18	9.6
3	5.82	69.6	1182.3	4.01	6.8	5.35	92.0	1120.4	5.35	6.9	5.89	102.7	1282.5	5.58	6.4
4	2.29	36.7	650.0	3.69	12.4	2.23	30.8	599.3	3.89	13.6	2.27	28.5	683.2	4.72	12.1
5	1.69	14.2	579.4	6.34	14.6	1.59	12.4	582.2	6.35	14.6	1.81	16.7	680.9	7.31	12.8
6	1.50	13.7	511.3	5.88	16.5	1.49	12.6	529.8	5.81	16.0	1.99	24.4	637.7	8.44	13.0
7	2.49	54.0	596.5	6.98	12.8	2.84	27.5	570.6	6.96	14.3	3.71	53.4	645.5	7.67	12.0
8	2.44	64.0	537.8	7.58	13.7	2.65	82.5	586.5	4.98	12.3	3.69	141.2	720.7	7.12	9.3
9	2.54	33.6	578.3	9.62	13.9	3.18	38.1	555.2	8.83	14.2	4.44	88.2	649.3	8.80	11.1
10	2.57	36.0	591.9	8.61	13.5	3.27	42.5	629.2	7.31	12.6	4.38	108.2	781.1	9.29	9.2
11	3.26	61.3	635.9	8.36	12.0	3.05	68.6	572.5	8.01	12.9	4.46	111.3	723.4	7.41	9.7
12	3.13	63.4	765.5	9.08	10.1	4.14	65.9	768.5	8.29	10.0	5.18	167.8	1026.5	9.73	6.8
13	3.73	75.7	647.2	9.33	11.4	4.54	80.3	714.6	8.28	10.4	5.26	152.7	868.7	7.53	7.9
14	2.39	51.0	493.9	7.20	15.3	3.25	54.0	569.9	7.17	13.3	3.89	126.5	768.6	7.75	9.1
15	3.26	55.0	609.3	4.57	12.6	6.22	66.3	607.9	4.92	12.1	4.33	90.2	889.2	6.01	8.5
16	2.66	169.0	1283.0	5.32	5.7	12.18	161.6	1286.8	13.34	5.6	10.88	230.0	1427.7	7.00	4.9
17	3.46	71.1	636.3	7.50	11.7	3.17	70.5	616.6	6.73	12.0	3.52	78.5	691.9	8.24	10.7
18	2.38	43.3	623.1	4.77	12.7	2.65	39.7	669.5	5.34	12.0	3.30	55.4	767.8	6.89	10.3
19	2.93	54.5	618.9	6.56	12.4	2.84	77.6	604.6	5.77	12.1	3.04	60.9	689.5	7.13	11.2
20	3.94	63.4	709.2	4.80	10.8	2.99	56.5	791.1	5.71	10.0	3.88	77.0	908.4	7.07	8.5
21	4.90	120.8	651.5	5.98	10.4	3.67	116.7	682.3	5.75	10.1	5.37	190.7	728.1	5.04	8.5
22	3.59	108.6	685.5	5.17	10.2	3.50	98.4	731.9	5.87	9.9	4.92	207.4	881.7	7.36	7.3
23	5.06	131.8	880.4	6.42	8.0	4.88	117.9	900.2	6.96	8.1	6.31	172.8	1050.2	9.24	6.6
24	2.54	45.6	572.1	7.37	13.6	2.20	39.3	574.4	7.71	13.8	3.03	72.3	658.4	6.48	11.4
25	2.45	49.7	549.6	6.34	14.0	2.70	47.5	580.5	7.43	13.4	3.77	122.2	731.7	8.65	9.5
26	4.98	86.6	824.4	6.46	9.1	5.07	70.1	932.1	7.26	8.4	6.08	118.2	1026.6	6.19	7.2
27	3.44	78.9	672.4	6.76	11.0	3.03	60.2	718.3	8.97	10.8	3.78	87.4	704.1	7.84	10.4
28	3.20	68.4	596.1	6.52	12.4	3.41	59.9	676.0	6.94	11.4	4.38	117.9	855.6	8.49	8.4
29	4.71	106.7	789.3	5.54	9.1	4.54	99.3	837.2	6.72	8.8	5.63	127.5	940.7	7.86	7.7
30	2.80	57.5	517.9	6.50	14.4	2.02	47.4	646.4	6.97	12.2	3.31	55.2	666.9	6.39	11.6
31	2.85	71.3	493.5	7.24	14.4	3.01	71.5	585.2	6.64	12.6	4.00	148.2	743.1	8.33	9.0
32	5.18	102.4	837.9	6.45	8.7	5.41	93.7	920.5	6.58	8.2	6.40	153.6	1080.7	8.80	6.6
SUM	2.52	43.7	582.9	7.14	13.5	2.55	41.3	608.4	7.20	13.0	3.44	76.8	725.3	8.55	10.4
HAG	2.83	68.1	628.8	6.64	11.9	3.19	69.8	710.7	7.90	10.7	4.04	130.9	802.0	7.43	8.7
33	0.62	13.6	88.3	0.12	79.5	0.65	13.1	117.5	0.12	63.3	0.57	10.0	90.9	0.04	81.8
34	7.10	135.6	1092.0	1.27	6.7	6.44	103.8	1110.0	1.58	6.9	6.42	92.4	1116.6	1.21	6.9
35	1.81	20.3	938.5	0.98	9.1	1.70	18.9	909.2	1.03	9.4	1.53	14.2	940.8	1.08	9.2
36	1.49	16.4	579.1	0.69	14.6	1.33	14.7	608.5	0.72	14.0	1.25	10.0	627.2	0.86	13.7
37	1.12	2.4	410.0	2.38	21.3	1.07	2.3	411.9	2.38	21.2	1.26	2.7	465.7	3.65	18.7
38	0.93	3.4	446.8	5.42	19.5	0.98	3.5	463.7	5.57	18.8	1.97	14.7	569.1	10.29	14.8
39	1.74	14.5	542.3	11.31	15.6	1.59	11.2	544.8	11.50	15.6	3.03	47.0	729.6	13.99	10.9

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX G,CONT'D

LISTING OF LOADED VEHICLE TEST RESULTS ON

VEHICLE 057 1972 DODG POLA 360

DETROIT

MODE NO.	---- IWT=4000, RLHP=13.2 ---- HC	CO	CO2	NOX	FUEL ECON	---- IWT=4500, RLHP=13.2 ---- HC	CO	CO2	NOX	FUEL ECON	---- IWT=5000, RLHP=27.1 ---- HC	CO	CO2	NOX	FUEL ECON
1	4.39	83.5	565.4	5.19	12.5	5.70	68.1	640.8	6.64	11.6	4.28	88.0	597.7	6.36	11.6
2	4.30	67.1	591.5	4.47	12.5	5.10	46.6	661.9	5.80	11.8	4.43	61.3	704.7	6.34	10.9
3	7.54	143.6	926.2	4.68	7.5	8.07	120.7	982.4	6.13	7.4	7.13	128.2	1013.5	7.12	7.2
4	3.44	65.9	562.2	5.63	13.1	3.53	56.9	589.0	6.46	12.9	3.55	64.1	578.0	6.98	12.9
5	2.56	32.3	501.2	6.95	15.8	2.64	27.2	542.2	8.26	15.0	2.73	35.6	569.2	8.56	14.0
6	2.38	22.2	437.4	5.40	14.5	2.44	19.4	466.6	6.14	17.6	2.66	29.4	552.7	7.25	14.6
7	3.26	74.8	536.3	6.29	13.2	3.38	92.6	548.6	5.92	12.6	3.77	109.3	602.9	6.97	11.3
8	2.82	54.4	486.8	6.26	15.3	2.97	62.4	531.1	6.63	13.9	3.52	89.2	673.0	6.67	10.8
9	2.94	32.7	552.1	6.99	14.5	3.08	41.6	547.9	8.61	14.2	3.81	86.5	635.0	6.95	11.3
10	3.16	29.1	530.7	7.80	15.1	3.31	29.4	554.5	7.78	14.5	3.96	69.7	723.0	9.62	10.5
11	3.18	46.4	637.9	10.44	12.3	3.53	71.3	626.3	8.84	11.8	4.84	173.5	662.7	6.05	9.3
12	3.71	36.8	713.8	10.22	11.3	3.95	42.9	720.1	10.22	11.1	4.98	103.2	922.3	12.00	8.1
13	3.96	41.9	691.3	11.32	11.5	3.41	55.2	710.4	11.32	11.0	5.25	166.4	781.8	8.40	8.4
14	2.75	26.5	516.7	7.29	15.7	2.70	28.3	536.2	7.50	15.1	3.76	85.3	684.7	8.55	10.7
15	4.90	53.1	504.9	4.13	14.7	4.48	40.0	536.3	4.61	14.5	4.95	65.0	657.1	6.30	11.5
16	10.62	166.5	990.4	5.05	6.7	10.04	158.0	1033.1	5.05	6.8	11.24	191.7	1162.9	6.86	5.9
17	3.47	63.6	482.9	6.58	14.9	3.31	60.6	533.4	6.66	13.9	3.90	96.8	580.1	7.10	11.9
18	3.24	44.6	568.8	6.37	13.7	3.23	38.8	596.3	7.17	13.3	3.94	70.1	699.7	8.58	10.8
19	3.49	65.0	465.1	6.43	15.3	3.31	58.9	492.0	5.90	14.9	3.73	75.1	567.7	7.94	12.7
20	4.07	53.7	668.2	7.13	11.6	4.09	44.2	705.1	8.19	11.3	4.78	68.9	853.8	10.92	9.1
21	3.70	93.0	622.6	8.12	11.4	4.19	142.5	628.1	6.11	10.3	5.17	198.4	653.6	5.19	9.0
22	3.90	53.2	639.2	8.09	12.1	4.20	74.2	673.8	7.97	11.0	5.38	143.7	824.0	9.46	8.3
23	6.60	97.9	789.4	9.57	9.2	6.59	97.9	800.0	9.11	9.1	7.64	137.1	929.4	11.50	7.6
24	2.76	39.6	521.1	6.37	15.0	2.83	40.5	550.6	8.39	14.2	3.35	64.6	607.2	8.68	12.3
25	2.65	29.3	521.5	7.23	15.4	2.77	31.9	537.9	7.61	14.9	3.29	57.1	704.5	10.15	11.0
26	7.04	75.2	731.6	6.11	10.2	7.40	68.3	761.8	6.74	9.9	7.34	79.5	952.2	9.39	8.1
27	3.32	56.4	577.2	9.02	13.1	3.40	50.8	624.7	9.71	12.4	4.01	90.3	723.4	10.21	10.1
28	3.93	42.0	561.2	7.35	13.9	3.87	40.8	608.9	7.85	13.0	4.32	59.0	804.7	11.56	9.7
29	6.35	91.4	656.5	7.22	10.8	6.05	86.6	697.5	8.41	10.4	7.20	104.0	801.8	10.46	9.0
30	2.79	45.8	509.1	7.87	15.0	2.84	40.4	545.1	8.57	14.4	3.68	92.1	594.1	7.25	11.6
31	2.74	37.1	551.2	7.80	14.4	2.83	35.0	580.0	8.30	13.6	3.96	101.1	653.3	9.68	10.6
32	6.97	84.3	750.2	6.27	9.8	7.21	72.5	802.5	7.13	9.4	8.25	125.3	947.8	8.72	7.6
SUM	3.05	44.3	544.9	7.20	14.2	3.35	43.3	580.6	7.68	13.5	3.69	72.7	683.3	9.29	11.0
HAG	3.46	54.4	580.9	7.39	12.9	3.42	60.3	626.9	7.76	12.[illegible]	4.27	105.9	732.3	8.41	9.7
33	0.62	14.4	79.2	0.28	85.5	0.57	10.9	76.5	0.08	93.0	0.56	10.6	72.9	0.11	97.2
34	4.92	158.4	1103.0	0.79	6.5	6.90	176.1	1217.7	1.32	5.9	6.11	171.6	1032.4	0.69	6.7
35	3.51	129.5	684.9	0.47	9.9	4.44	134.9	674.2	0.40	9.9	3.90	119.2	694.8	0.47	9.9
36	2.73	101.0	489.8	0.35	13.5	3.62	97.2	494.1	0.44	13.4	3.32	91.1	519.0	0.42	13.2
37	2.14	26.1	416.8	2.46	19.1	2.75	19.4	476.6	3.20	17.2	2.07	8.7	476.3	4.87	17.9
38	2.40	30.6	513.6	6.67	15.6	2.90	15.3	588.9	8.95	14.3	2.96	36.8	681.9	11.82	11.8
39	2.08	23.8	481.4	8.44	16.9	2.65	18.9	519.9	9.40	15.9	2.62	33.5	697.2	13.19	11.7

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX G,CONT'D

LISTING OF LOADED VEHICLE TEST RESULTS ON

VEHICLE 062 1972 FORD STWN 400

DETROIT

MODE NO.	---- IWT=4500, RLHP=14,0 ---- HC	CO	CO2	NOX	FUEL ECON	---- IWT=5000, RLHP=14,0 ---- HC	CO	CO2	NOX	FUEL ECON	---- IWT=5500, RLHP=28,3 ---- HC	CO	CO2	NOX	FUEL ECON
1	4,22	67,1	640,0	1,06	11,7	4,15	57,9	686,7	4,56	11,2	4,61	64,8	695,6	5,39	10,9
2	4,01	48,9	787,8	6,98	10,1	3,89	45,6	866,2	6,32	9,3	4,43	48,1	883,7	7,11	9,1
3	6,26	103,7	1160,3	5,44	8,6	6,32	102,1	1244,7	5,99	8,2	7,14	93,1	1282,0	7,10	8,1
4	2,93	41,8	598,7	2,78	13,2	3,10	40,6	658,8	5,35	12,1	3,06	35,9	662,6	6,35	11,9
5	1,98	17,3	557,0	4,45	15,0	1,95	23,8	573,7	6,40	14,4	2,21	23,5	629,8	7,71	13,2
6	1,94	14,7	547,9	7,89	15,4	1,75	14,3	569,4	6,15	14,8	2,39	27,5	647,4	8,18	12,7
7	2,24	61,0	596,6	3,99	12,7	2,69	76,0	625,4	5,98	11,8	2,88	61,9	690,4	7,01	11,1
8	2,47	45,6	610,0	8,38	12,9	2,51	62,1	636,5	6,47	12,0	2,76	91,3	801,5	9,13	9,3
9	2,57	31,2	604,8	5,64	13,4	2,90	48,5	622,3	7,32	12,5	3,44	63,2	744,4	8,41	10,4
10	2,98	29,6	651,7	10,48	12,5	3,12	37,8	596,0	8,00	13,3	3,47	76,3	877,6	10,04	8,8
11	2,60	40,7	681,0	4,90	11,8	2,86	54,4	727,2	8,32	10,8	3,25	76,8	875,3	2,57	8,8
12	3,48	36,2	816,5	12,85	10,0	3,88	44,8	905,2	9,67	9,0	4,12	87,3	1082,4	13,63	7,2
13	3,25	51,2	762,2	6,60	10,4	3,65	58,0	823,5	10,23	9,6	3,99	88,6	961,6	9,99	8,0
14	2,44	26,4	607,7	8,89	13,5	2,54	31,4	639,3	7,67	12,7	2,99	67,7	816,1	9,26	9,5
15	3,84	41,1	656,1	3,47	12,1	3,61	37,5	708,8	4,42	11,4	4,18	63,0	798,1	6,29	9,7
16	8,56	129,2	1363,1	7,48	5,6	9,64	173,3	1324,9	5,80	5,5	9,71	191,1	1512,6	7,74	4,8
17	2,88	63,3	583,5	3,35	12,8	3,37	77,5	645,3	6,42	11,4	3,42	100,0	719,0	6,73	10,0
18	2,54	34,7	639,6	4,72	12,6	2,56	34,7	663,7	6,83	12,2	2,96	55,1	786,3	8,21	10,1
19	2,55	52,8	575,2	3,55	13,3	2,62	56,9	660,3	5,88	11,7	2,98	75,4	719,6	7,16	10,5
20	2,91	36,3	759,4	9,83	10,7	2,62	39,0	808,6	7,27	10,1	3,92	64,7	915,1	9,42	8,6
21	2,88	97,3	771,8	4,15	9,5	3,03	175,8	780,0	6,72	9,3	4,36	161,8	737,5	5,52	8,8
22	3,63	60,1	756,5	9,16	10,3	3,80	75,6	776,1	8,42	9,8	4,34	150,6	1026,8	10,53	6,9
23	5,70	101,5	916,8	6,02	8,1	6,07	114,2	957,4	14,75	7,7	6,24	155,4	1093,9	9,65	6,5
24	2,04	27,5	591,3	4,94	13,8	2,19	34,8	618,8	7,74	13,0	2,67	58,0	661,6	6,52	11,7
25	2,13	23,3	622,8	4,94	13,3	2,24	27,4	663,7	7,39	12,4	2,88	86,0	807,9	8,46	9,3
26	5,72	52,7	958,5	8,85	8,4	5,76	46,8	1023,0	6,47	8,0	5,85	102,7	1074,2	8,04	7,1
27	2,61	48,4	715,8	5,58	11,1	2,60	47,2	786,8	9,06	10,2	3,31	88,5	858,1	9,23	8,8
28	2,88	33,7	682,1	4,96	11,9	3,02	35,3	711,3	7,35	11,4	3,34	65,5	911,8	10,43	8,7
29	4,78	89,5	839,6	5,27	8,9	5,10	98,9	872,1	7,31	8,5	5,23	130,8	998,5	9,01	7,3
30	2,07	35,3	556,1	4,93	14,4	2,26	40,6	610,6	6,53	13,0	2,80	66,3	733,1	6,87	10,5
31	2,27	34,0	638,9	9,73	12,7	1,70	50,0	666,2	6,22	11,8	3,19	108,7	760,6	8,98	9,4
32	5,47	65,5	969,6	9,25	8,1	6,08	72,2	981,7	7,65	8,0	6,53	144,0	1103,3	9,13	6,6
SUM	2,37	37,4	633,5	6,56	12,7	2,43	40,2	660,9	6,92	12,1	2,84	58,6	780,0	8,34	10,1
BAG	2,84	45,1	714,6	6,57	11,2	2,94	57,1	757,4	7,21	10,4	3,39	97,6	872,5	7,94	8,6
33	1,01	34,1	101,1	0,15	56,2	0,73	24,0	115,5	0,25	57,1	0,61	22,8	114,4	0,28	58,4
34	7,22	214,8	1343,6	1,42	5,2	7,10	239,9	1320,2	1,31	5,1	6,65	239,2	1352,6	2,26	5,1
35	2,82	70,7	805,1	0,60	9,6	2,99	96,4	725,9	0,58	10,0	2,59	79,8	793,2	0,79	9,6
36	1,41	46,8	605,3	0,95	13,0	1,24	16,8	688,9	0,91	12,3	1,16	17,6	696,4	1,16	12,2
37	0,85	3,1	486,7	2,30	18,0	1,11	9,0	485,1	2,26	17,7	1,16	4,8	537,7	4,12	16,2
38	1,20	6,9	478,0	5,58	18,0	1,28	6,5	506,1	5,80	17,1	2,01	18,6	719,2	10,67	11,8
39	1,55	18,8	571,6	8,40	14,6	1,53	20,2	570,1	7,90	14,6	1,85	17,2	695,2	10,38	12,2

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1,85 CARBON TO HYDROGEN RATIO

APPENDIX G,CONT'D

LISTING OF LOADED VEHICLE TEST RESULTS ON

VEHICLE 065 1972 MERC MONT 400

DETROIT

MODE NO.	---- IWT=4500, RLHP=14.0 ---- HC	CO	CO2	NOX	FUEL ECON	---- IWT=5000, RLHP=14.0 ---- HC	CO	CO2	NOX	FUEL ECON	---- IWT=5500, RLHP=28.3 ---- HC	CO	CO2	NOX	FUEL ECON
1	4.42	21.4	918.7	5.41	9.2	4.52	28.5	459.6	5.36	17.1	5.11	78.2	821.2	5.21	9.2
2	3.66	7.1	620.9	5.50	13.8	3.88	18.2	844.6	7.00	10.0	4.57	41.4	781.5	7.62	10.3
3	6.56	45.6	1151.0	6.23	7.1	6.88	46.7	1029.6	7.39	7.9	8.33	91.3	1111.2	7.52	6.9
4	2.76	16.1	688.3	3.49	12.3	3.03	22.9	494.4	6.06	16.4	3.71	44.0	586.0	6.85	13.3
5	1.92	12.4	663.7	4.49	12.9	1.92	11.6	540.2	7.63	15.6	2.34	24.8	657.7	6.07	12.6
6	1.67	4.9	441.3	6.04	19.5	1.70	10.0	553.1	6.93	15.5	2.16	19.2	653.0	6.97	12.9
7	2.39	135.0	779.4	6.38	8.4	3.04	73.9	575.8	6.54	12.7	3.29	65.1	629.3	7.18	11.5
8	1.43	40.7	521.4	7.71	15.0	2.57	66.6	636.4	8.45	11.9	2.71	78.3	769.5	11.23	9.8
9	1.44	37.2	715.3	8.38	11.4	1.91	63.6	591.3	7.54	12.7	3.22	139.3	858.1	9.44	8.2
10	2.42	14.9	524.2	9.42	16.0	2.63	39.7	684.5	9.39	11.8	2.93	58.2	845.0	12.23	9.4
11	2.76	55.2	858.3	8.39	9.3	3.44	100.2	735.8	6.92	9.8	4.29	145.9	743.1	6.70	9.0
12	2.74	19.4	630.3	10.81	13.3	4.09	45.4	836.8	11.80	9.7	4.33	120.1	1020.4	13.31	7.3
13	3.19	74.4	960.5	4.73	8.2	3.50	82.2	834.4	10.20	9.1	4.95	151.3	930.1	6.69	7.5
14	2.18	20.9	490.1	6.83	16.7	2.26	31.3	556.8	8.60	14.5	3.07	83.1	835.2	11.01	9.1
15	4.03	24.8	495.5	5.26	16.2	4.00	32.7	544.4	5.99	14.6	4.35	52.1	653.9	7.47	11.8
16	9.27	77.2	1001.2	8.15	7.7	9.62	119.7	1037.7	7.64	7.1	10.33	142.7	1224.5	3.34	6.0
17	2.83	35.5	902.4	7.42	9.2	3.13	60.0	617.8	6.70	12.3	3.56	68.4	645.2	8.79	11.6
18	2.17	11.9	480.6	7.43	17.5	2.28	25.9	665.4	7.55	12.4	2.78	34.2	737.6	10.83	11.1
19	2.64	32.6	869.0	6.92	9.6	3.06	52.0	596.9	6.99	12.9	3.10	53.9	688.7	9.10	11.3
20	2.75	17.2	578.6	8.15	14.4	3.17	36.1	783.7	8.89	10.4	3.39	60.5	849.1	12.47	9.3
21	3.49	176.1	997.6	6.80	6.9	4.15	197.0	686.4	7.00	8.8	4.74	213.5	798.0	6.96	7.7
22	3.26	41.2	577.5	9.99	13.6	3.53	76.9	753.8	10.99	10.0	4.25	122.1	911.4	11.67	7.9
23	6.10	70.2	1068.0	7.00	7.4	5.90	67.5	935.7	11.96	8.1	6.65	120.1	1031.4	13.51	7.2
24	2.07	29.1	783.1	8.55	10.6	2.15	29.7	628.7	9.29	13.0	3.11	48.0	575.4	8.58	13.4
25	1.78	10.7	473.0	9.76	17.9	1.87	17.4	583.9	9.68	14.4	2.74	67.8	729.0	12.44	10.5
26	5.37	25.8	703.1	5.48	11.7	5.37	34.7	804.0	9.05	10.1	5.98	79.8	1051.6	10.64	7.4
27	2.26	24.6	952.7	9.94	8.9	2.77	53.6	728.2	10.54	10.8	4.41	104.2	696.7	7.93	10.2
28	2.38	11.4	518.7	9.93	16.3	2.56	25.1	671.6	10.02	12.3	3.60	82.5	853.2	12.46	8.9
29	4.79	39.3	988.1	8.64	8.3	4.56	68.0	514.1	12.33	13.9	5.87	60.4	966.8	12.81	8.2
30	2.04	38.5	826.0	8.32	9.9	2.31	54.6	659.5	9.07	11.8	3.34	113.3	725.9	8.08	9.7
31	1.95	13.6	486.7	9.70	17.2	2.31	47.9	621.0	8.84	12.6	3.07	92.3	766.4	11.56	9.6
32	5.02	24.3	747.8	9.58	11.1	5.39	63.5	851.4	9.13	9.2	6.35	104.8	1025.3	11.71	7.3
SUM	2.17	26.9	656.4	8.53	12.6	2.29	36.5	626.8	8.77	12.8	2.76	59.0	758.6	11.27	10.3
HAG	2.69	38.0	707.6	9.35	11.4	2.78	54.3	713.8	9.36	11.0	3.15	95.5	819.6	8.98	9.1
33	0.73	4.1	92.9	0.15	81.0	0.66	6.8	91.6	0.14	85.0	0.59	5.6	90.7	0.22	87.5
34	8.14	81.6	1107.8	1.69	7.0	7.45	94.9	1074.4	1.04	7.1	8.87	112.4	1419.8	6.80	5.5
35	4.38	46.8	563.5	0.53	13.6	4.12	55.6	546.7	0.34	13.7	3.82	32.3	618.2	0.97	13.0
36	2.47	11.0	491.3	1.44	17.2	2.30	21.3	454.8	0.70	17.9	2.43	11.8	553.5	2.27	15.4
37	1.14	3.1	469.9	3.01	18.6	1.07	2.8	438.5	2.45	19.9	1.36	9.3	567.1	9.41	15.1
38	1.12	5.2	540.1	7.38	16.1	1.00	4.8	513.2	6.63	16.9	1.34	7.0	624.4	12.38	13.4
39	1.17	4.4	576.4	13.09	15.1	1.03	4.3	580.9	13.46	15.0	0.73	5.3	785.8	19.70	11.1

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX G,CONT'D

LISTING OF LOADED VEHICLE TEST RESULTS ON

VEHICLE 067 1972 OLDS 98 455

DETROIT

MODE NO.	---- INT=4500, RLHP=14.0 ----					---- INT=5000, RLHP=14.0 ----					---- INT=5500, RLHP=28.3 ----				
	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON
1	2.21	26.5	745.1	2.68	11.2	1.78	46.8	566.2	4.86	13.8	6.19	82.0	465.7	6.48	14.4
2	2.29	19.1	837.0	5.14	10.2	2.19	15.9	929.4	4.78	9.2	10.51	38.5	512.7	22.98	14.6
3	3.45	20.4	1311.6	4.91	6.6	2.94	17.5	1274.5	5.02	6.8	11.52	45.7	839.6	21.07	9.4
4	1.19	5.7	760.5	2.80	11.5	1.02	4.0	674.4	3.28	13.0	3.14	9.8	821.9	6.42	10.5
5	1.06	9.2	630.0	5.31	13.7	0.83	3.5	566.3	5.46	15.5	3.98	8.8	625.0	8.57	13.6
6	1.12	4.5	554.7	6.92	15.7	0.90	2.4	605.9	5.09	14.5	4.10	8.9	639.1	4.72	13.5
7	2.35	119.7	431.0	5.29	14.2	2.04	172.0	501.7	4.67	11.4	1.77	180.4	737.5	1.84	8.6
8	2.01	62.5	589.1	9.08	12.8	2.00	64.2	619.7	6.58	12.2	2.64	75.5	778.4	5.09	9.8
9	2.25	39.4	602.7	8.18	13.2	2.24	47.9	516.8	7.57	14.8	2.77	199.6	707.3	5.01	8.6
10	2.05	16.2	650.2	10.34	13.0	2.19	14.5	684.4	8.81	12.4	2.10	64.8	851.1	4.47	9.2
11	2.28	68.0	717.2	7.27	10.7	2.67	131.3	590.7	7.25	11.0	3.33	284.6	746.9	7.50	7.4
12	2.45	29.0	864.2	13.13	9.7	2.88	41.3	871.2	9.69	9.4	5.28	149.2	947.8	5.69	7.4
13	2.89	71.8	835.5	8.77	9.3	3.09	133.7	792.6	8.20	8.8	1.46	316.4	856.1	6.82	6.5
14	1.65	23.0	614.4	9.52	13.5	2.33	38.8	649.2	7.43	12.4	1.29	94.9	740.3	5.81	9.9
15	2.56	20.7	657.1	5.18	12.7	4.03	21.9	677.4	4.31	12.2	2.37	56.7	736.1	14.80	10.7
16	5.57	34.0	1500.7	5.96	5.6	7.41	28.9	1519.4	5.96	5.6	12.33	89.5	1589.2	24.74	5.0
17	1.60	19.0	704.7	6.07	12.0	1.80	14.8	710.2	8.03	12.0	1.74	63.1	764.9	1.68	10.2
18	1.52	9.7	724.2	8.22	11.9	1.59	6.7	742.6	7.99	11.7	2.34	34.0	828.1	3.99	10.0
19	1.35	12.6	681.5	6.60	12.6	1.34	10.4	644.6	7.26	13.3	4.20	39.4	752.1	14.16	10.7
20	1.92	9.6	854.0	9.39	10.1	2.31	9.1	854.9	8.53	10.1	8.48	26.6	913.4	8.90	9.0
21	3.57	202.2	700.5	4.38	8.6	3.76	254.2	706.6	3.77	7.9	3.13	267.5	832.9	9.29	7.3
22	3.01	79.0	737.9	8.94	10.2	3.62	104.5	746.9	7.30	9.6	6.14	170.3	935.6	6.43	7.3
23	3.84	46.3	1040.6	7.76	7.9	4.14	55.5	1060.7	8.10	7.6	5.30	77.4	659.3	24.51	11.1
24	2.14	23.9	839.6	7.87	13.0	2.10	58.8	638.4	7.49	12.1	4.28	269.4	372.6	9.21	11.0
25	1.42	13.3	657.7	9.78	13.0	1.90	24.3	670.6	8.93	12.4	2.59	103.5	409.9	11.78	15.3
26	4.43	23.3	976.0	8.46	8.6	4.55	26.6	993.6	7.57	8.5	10.70	95.3	1066.6	23.53	7.1
27	2.10	47.5	748.5	9.19	10.7	2.35	59.0	783.6	9.46	10.0	0.90	343.9	747.2	7.04	6.9
28	1.96	15.0	719.1	9.04	11.9	2.11	27.4	776.2	8.43	10.7	1.13	110.7	816.5	8.57	8.9
29	3.01	22.5	968.1	7.63	8.8	2.49	20.2	995.3	7.74	8.6	1.31	69.5	1081.5	5.63	7.4
30	1.88	56.8	651.1	7.86	11.9	2.20	79.8	640.1	7.66	11.5	0.65	344.2	663.1	1.24	7.4
31	1.73	25.8	669.6	7.94	12.4	2.07	58.9	679.5	8.01	11.4	0.74	118.3	765.5	2.08	9.3
32	4.67	32.5	986.9	6.96	8.4	4.18	55.7	988.4	6.34	8.1	3.07	109.1	1079.9	5.47	7.0
SUM	1.69	28.5	668.2	7.73	12.4	1.83	40.5	670.5	7.68	12.0	2.38	98.8	763.3	8.66	9.6
HAG	2.19	43.0	726.2	7.84	11.1	2.46	65.3	747.0	7.54	10.3	3.36	160.1	835.1	7.65	8.1
33	0.38	2.1	121.5	0.13	70.4	0.38	4.0	128.1	0.05	65.5	0.36	2.8	123.6	0.04	68.6
34	4.16	24.4	1551.9	2.59	5.5	4.02	26.2	1496.5	1.27	5.7	3.75	15.8	1415.9	1.11	6.1
35	2.21	11.3	868.2	0.74	9.9	1.79	9.9	843.3	0.77	10.3	1.62	7.9	894.7	0.98	9.7
36	0.72	5.6	796.8	1.09	11.0	0.83	5.9	793.5	1.14	11.0	0.78	4.7	753.7	1.07	11.6
37	1.23	4.1	471.2	2.03	18.4	1.17	4.1	464.2	2.15	18.7	1.46	4.1	510.3	3.66	17.0
38	0.92	3.0	512.1	6.50	17.1	0.97	3.1	527.8	7.24	16.6	3.02	3.7	644.9	8.49	13.4
39	0.61	3.8	604.5	10.81	14.5	0.71	4.0	607.6	12.11	14.4	0.85	7.1	869.6	16.27	10.0

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX G,CONT'D

LISTING OF LOADED VEHICLE TEST RESULTS ON

VEHICLE 078 1971 BUIC ELEC 455

DETROIT

MODE NO.	---- IWT=4500, RLHP=14.0 ---- HC	CO	CO2	NOX	FUEL ECON	---- IWT=5000, RLHP=14.0 ---- HC	CO	CO2	NOX	FUEL ECON	---- IWT=5500, RLHP=28.3 ---- HC	CO	CO2	NOX	FUEL ECON
1	8.35	148.3	528.2	3.47	11.3	7.41	142.8	473.1	5.58	12.3	7.16	127.3	347.8	7.83	14.3
2	6.46	133.9	638.6	2.66	10.2	6.81	147.8	694.3	3.27	9.4	5.86	93.9	843.1	5.57	8.8
3	14.48	257.9	941.2	3.13	6.4	13.96	253.3	1007.3	3.57	6.1	12.22	225.4	1003.9	5.58	6.4
4	4.72	68.5	555.4	4.20	13.1	4.88	94.3	578.4	4.86	12.0	4.12	73.4	558.1	5.95	12.9
5	2.87	48.0	543.3	7.48	14.1	2.88	45.4	569.9	8.40	13.6	2.44	25.9	596.1	11.37	13.8
6	2.59	31.3	495.5	4.91	16.1	2.62	24.5	537.4	6.75	15.2	2.32	16.3	701.2	11.31	12.1
7	3.97	53.4	569.9	6.83	13.3	3.78	71.0	585.1	6.68	12.5	3.27	121.6	631.3	7.89	10.7
8	3.05	56.8	564.5	7.04	13.4	3.46	96.7	586.9	7.20	11.8	3.64	132.7	749.4	11.34	8.7
9	3.59	47.7	441.9	11.78	16.8	3.54	46.6	601.9	10.98	12.9	3.53	121.0	677.0	11.48	10.1
10	3.78	31.2	602.2	9.20	13.4	3.69	36.4	617.4	9.05	12.9	4.00	90.1	901.2	14.75	8.4
11	4.17	57.0	657.5	12.72	11.7	4.45	81.4	687.4	11.21	10.7	3.88	159.1	698.0	8.51	9.2
12	4.61	39.3	750.7	11.97	10.7	4.67	53.4	788.1	12.72	10.0	5.16	135.7	1002.0	16.63	7.2
13	4.92	63.7	783.6	15.85	9.9	5.51	86.9	798.8	13.74	9.3	6.13	219.8	888.9	11.05	7.2
14	3.36	31.1	564.6	8.53	14.2	3.33	44.6	590.3	8.75	13.2	4.51	104.0	795.2	11.66	9.1
15	6.76	68.3	550.0	4.62	13.0	7.68	38.4	600.5	4.62	13.0	7.06	84.3	773.7	6.19	9.6
16	17.92	232.0	1093.5	6.10	5.9	18.55	235.8	1126.5	6.10	5.7	15.29	220.3	1367.6	14.29	5.0
17	5.22	84.5	595.1	10.45	11.9	5.35	87.1	608.0	10.60	11.6	4.73	118.6	748.8	7.68	9.3
18	3.40	49.1	584.8	7.35	13.2	3.93	46.9	613.9	7.35	12.7	3.80	51.3	747.8	11.06	10.6
19	4.69	66.0	552.0	8.76	13.2	5.09	72.2	602.9	10.12	12.1	4.12	65.3	727.8	13.81	10.5
20	4.92	56.1	677.5	8.05	11.4	5.27	63.5	716.3	9.04	10.7	4.40	56.5	894.7	16.35	8.9
21	5.28	137.1	758.5	7.19	9.0	6.03	197.5	684.4	5.63	8.8	5.98	334.1	779.5	6.05	6.7
22	5.13	94.7	673.1	8.08	10.6	5.79	121.7	701.3	7.58	9.7	6.16	165.9	921.1	13.03	7.4
23	10.10	138.4	823.1	8.91	8.3	11.34	164.8	854.0	8.74	7.7	9.44	170.0	1054.3	15.36	6.6
24	3.12	41.0	599.0	11.99	13.2	3.44	51.1	585.9	10.59	13.1	3.09	132.1	663.4	9.67	10.1
25	2.76	24.3	584.4	9.90	14.1	3.07	35.0	507.2	8.96	15.5	3.93	91.7	711.0	11.29	10.2
26	10.22	80.6	794.1	7.08	9.3	10.99	90.2	819.5	6.89	8.9	9.80	124.8	946.6	8.15	7.8
27	4.28	58.0	696.7	13.37	11.1	4.76	68.7	734.0	13.41	10.4	5.16	169.3	767.1	10.85	8.5
28	4.16	34.8	644.5	8.77	12.5	4.92	46.7	595.5	7.90	13.0	5.03	92.8	800.2	12.22	9.2
29	9.41	113.9	793.2	4.72	8.9	10.47	132.6	795.4	9.06	8.6	8.45	142.2	977.8	13.16	7.2
30	3.16	40.5	610.2	17.97	13.0	3.66	64.1	614.4	9.36	12.2	3.42	206.0	698.4	[illegible]	8.6
31	2.94	37.2	590.7	9.27	13.5	3.63	80.6	591.8	7.93	12.2	4.28	120.5	694.6	11.09	9.4
32	9.36	82.8	808.0	7.33	9.2	9.44	116.3	817.9	6.29	8.6	9.61	236.0	857.4	9.36	7.1
SUM	3.56	47.9	602.6	8.52	12.9	3.65	55.8	617.9	8.39	12.4	3.75	92.1	751.0	11.21	9.6
AAG	4.49	67.1	642.6	9.23	11.6	4.70	82.8	666.2	8.73	10.9	4.94	139.6	782.3	10.15	8.7
33	1.56	29.2	81.4	0.09	67.2	1.37	26.8	85.7	0.14	67.1	1.40	28.9	85.7	0.15	65.5
34	20.19	349.9	970.4	0.74	5.6	17.42	333.1	1015.8	0.74	5.8	17.56	347.1	983.6	0.79	5.6
35	6.52	148.3	725.2	0.42	9.1	6.55	138.6	742.6	0.56	9.0	7.23	156.7	597.4	0.48	10.2
36	3.76	87.7	508.0	0.39	13.5	3.57	79.4	535.6	0.42	13.2	3.61	74.8	546.8	0.48	13.1
37	1.91	23.7	441.1	1.42	18.3	1.75	18.3	464.9	1.74	17.8	1.43	6.5	525.8	3.16	16.4
38	1.47	8.6	508.7	5.95	16.8	1.20	7.7	526.5	5.34	16.4	1.70	8.9	625.9	11.13	13.5
39	1.47	13.2	573.3	10.72	14.8	1.33	11.4	582.8	11.38	14.7	1.84	20.8	795.5	17.45	10.6

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX G, CONT'D

LISTING OF LOADED VEHICLE TEST RESULTS ON

VEHICLE 085 1971 CHEV IMPA 400

DETROIT

MODE	---- IWT=4000, RLHP=13.2 ----					---- IWT=4500, RLHP=13.2 ----					---- IWT=5000, RLHP=29.0 ----				
NO.	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON
1	3.66	7.4	641.2	7.00	13.4	3.02	17.7	702.1	8.12	12.0	6.16	79.0	639.1	3.92	11.3
2	5.51	12.0	767.6	6.67	11.0	2.79	16.0	797.5	7.28	10.7	9.13	130.7	638.7	5.76	10.2
3	5.90	14.7	1214.0	8.94	7.1	4.77	22.1	1294.4	9.84	6.6	12.48	157.7	1282.7	10.06	5.7
4	4.50	8.7	578.8	5.43	14.8	2.08	15.0	597.8	5.79	14.1	4.15	64.6	620.3	7.40	12.1
5	1.67	10.6	488.4	6.66	17.5	1.49	12.8	501.9	7.04	16.9	2.54	44.7	547.3	9.18	14.2
6	1.54	9.8	497.1	5.58	17.2	1.28	10.5	498.7	5.85	17.1	2.63	48.7	592.4	8.24	13.1
7	2.00	63.9	529.8	6.14	13.9	2.29	88.3	537.2	5.17	13.0	4.56	131.1	589.0	6.71	11.0
8	1.87	44.2	540.7	8.25	14.4	1.91	59.8	533.3	7.70	14.0	5.12	111.9	733.6	10.86	9.6
9	1.57	26.4	518.8	9.33	15.7	1.80	42.0	533.7	8.67	14.7	3.91	110.1	665.9	10.14	10.4
10	1.64	20.0	581.5	9.01	14.4	1.77	27.1	607.2	9.81	13.5	4.78	94.4	822.6	13.01	9.0
11	1.88	51.1	578.3	9.08	13.4	2.07	45.9	630.7	10.41	12.5	5.46	202.6	669.7	6.01	8.8
12	2.16	35.2	725.8	11.66	11.3	2.20	35.3	765.2	12.53	10.7	6.25	168.1	982.6	13.00	7.0
13	2.14	37.2	704.3	12.61	11.5	2.64	76.3	752.2	11.70	10.1	5.14	267.4	823.6	7.81	7.0
14	1.59	22.8	538.9	9.02	15.3	1.72	35.0	547.7	8.63	14.6	3.78	107.4	690.0	10.14	10.2
15	1.93	14.4	603.5	6.24	14.0	2.12	23.7	611.8	6.46	13.5	4.69	95.1	728.7	7.53	9.9
16	5.20	27.4	1410.4	11.69	6.0	5.73	51.5	1442.3	10.40	5.8	11.21	210.6	1544.7	11.04	4.6
17	1.85	13.9	610.8	9.20	13.9	2.14	28.1	661.3	9.35	12.5	8.17	134.1	690.2	7.45	9.6
18	1.57	7.7	590.9	8.62	14.6	1.83	20.1	629.2	8.98	13.3	9.23	101.4	717.2	9.72	9.8
19	1.63	14.0	558.1	7.05	15.2	1.78	21.5	570.8	7.88	14.5	7.00	82.1	643.4	7.84	11.2
20	1.88	11.3	698.3	9.12	12.3	2.17	24.4	773.1	10.65	10.8	10.73	121.3	850.7	11.05	8.3
21	2.65	109.8	638.6	6.88	10.8	3.03	144.3	688.4	7.28	9.6	15.58	280.4	732.4	5.00	7.3
22	2.21	50.9	679.3	10.45	11.6	2.64	71.5	693.4	9.86	10.9	22.02	221.9	850.1	9.85	7.0
23	3.21	37.9	920.0	10.86	9.0	3.40	59.6	953.0	12.5	8.4	22.24	183.4	1077.5	12.97	6.2
24	1.31	16.1	522.1	8.47	16.1	1.76	27.0	578.2	10.31	14.2	10.84	160.8	621.8	7.59	9.8
25	1.40	15.4	531.6	10.23	15.8	1.65	22.9	566.0	10.24	14.6	15.57	123.4	671.8	9.16	9.7
26	2.75	15.0	878.4	10.18	9.7	3.16	31.8	724.9	6.84	11.3	23.81	163.9	1023.3	9.55	6.5
27	1.81	17.7	631.5	11.98	13.3	2.03	31.4	681.4	12.39	12.0	8.15	204.6	682.1	7.03	8.6
28	1.70	18.6	632.3	9.55	13.3	1.97	29.9	668.6	11.20	12.3	5.35	134.6	786.0	10.65	8.7
29	2.77	21.1	882.0	11.41	9.6	3.35	42.5	929.2	12.56	8.8	8.78	159.1	937.7	11.58	7.3
30	1.58	19.7	528.9	10.85	15.7	2.05	42.2	564.9	10.90	13.9	12.31	234.3	563.9	4.99	9.1
31	1.58	20.8	508.4	9.26	16.2	1.72	26.2	542.9	9.16	15.1	18.18	158.4	680.7	8.20	9.0
32	3.04	26.1	864.1	9.74	9.7	3.50	44.3	891.1	9.87	9.1	30.73	206.2	1001.7	8.82	6.2
SUM	1.70	21.1	574.1	8.43	14.5	1.83	29.6	595.2	9.24	13.7	5.92	96.8	705.2	9.96	10.1
BAG	1.73	29.1	636.8	8.53	12.9	1.89	40.7	663.1	8.63	12.1	10.37	152.5	746.0	8.20	8.7
33	0.57	1.1	147.8	1.01	58.6	0.57	2.3	149.1	1.10	57.4	0.56	1.6	144.6	1.09	59.6
34	6.25	13.7	1788.1	8.46	4.9	6.25	18.9	1824.3	9.16	4.7	11.87	99.2	2016.9	12.22	4.0
35	2.55	5.0	887.1	2.65	9.8	2.53	5.6	877.3	2.65	9.9	2.53	10.7	902.2	3.04	9.6
36	1.63	3.3	584.4	1.76	14.9	1.69	2.1	591.8	2.10	14.8	1.68	5.9	589.8	2.12	14.7
37	0.85	2.4	395.4	1.75	22.1	0.86	1.9	408.2	2.12	21.4	1.03	4.0	479.5	3.98	18.1
38	0.77	3.9	448.2	5.23	19.4	0.82	4.0	454.4	12.34	19.2	1.46	16.5	580.9	11.23	14.5
39	1.28	14.4	493.8	10.58	17.1	1.37	15.9	494.2	10.55	17.0	1.32	11.3	698.6	16.23	12.3

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX G, CONT'D

LISTING OF LOADED VEHICLE TEST RESULTS ON

VEHICLE 088 1971 DODG CHAR 318

DETROIT

MODE NO.	---- IWT=3500, RLHP=12.3 ---- HC	CO	CO2	NOX	FUEL ECON	---- IWT=4000, RLHP=12.3 ---- HC	CO	CO2	NOX	FUEL ECON	---- IWT=4500, RLHP=27.3 ---- HC	CO	CO2	NOX	FUEL ECON
1	3.56	32.1	560.0	2.99	14.3	3.50	46.5	604.3	3.38	12.9	4.94	89.0	824.9	4.96	9.1
2	3.67	28.3	649.2	4.09	12.6	3.43	24.2	694.3	4.89	11.9	4.17	44.6	780.3	6.17	10.3
3.	5.65	32.7	1015.2	3.83	8.2	4.70	22.2	1056.7	4.50	8.0	5.30	49.1	1176.5	6.19	7.0
4	2.59	19.3	529.3	3.79	15.6	2.22	15.1	592.5	4.10	14.2	2.34	28.7	665.2	4.63	12.4
5	1.90	9.3	498.4	4.68	17.1	1.70	10.7	548.0	5.27	15.6	1.91	31.1	629.7	6.30	13.0
6	1.62	3.5	479.4	4.31	18.1	1.55	4.2	499.7	4.90	17.4	1.94	19.6	584.9	10.19	14.3
7	2.34	38.5	584.9	5.49	13.6	2.34	54.2	581.1	6.02	13.2	2.74	92.9	703.7	7.73	10.3
8	1.96	20.3	537.3	7.08	15.4	2.11	31.2	569.4	7.89	14.2	1.77	60.1	764.3	9.15	10.3
9	2.15	17.3	568.3	6.74	14.7	1.51	22.9	573.4	7.07	14.5	2.98	87.1	741.4	8.70	10.0
10	2.31	11.0	588.9	7.41	14.5	2.61	10.3	609.2	6.30	14.0	3.02	52.8	863.5	9.45	9.3
11	2.63	39.3	610.4	6.56	13.0	3.24	70.6	634.7	6.31	11.7	3.44	130.3	777.1	6.59	8.9
12	2.71	15.9	718.1	9.87	11.8	3.29	25.7	738.2	10.60	11.2	4.22	91.5	1027.0	10.89	7.5
13	2.90	34.8	714.9	7.98	11.4	3.61	74.4	720.0	7.16	10.5	4.06	139.5	897.2	7.92	7.9
14	1.98	11.8	539.5	6.97	15.7	2.36	20.6	540.4	7.26	15.3	2.92	56.6	762.6	7.97	10.3
15	3.89	9.3	572.7	4.40	14.8	4.14	11.0	593.0	4.84	14.2	4.23	38.7	795.7	6.59	10.2
16	7.75	20.6	1314.2	6.02	6.5	8.67	18.9	1287.8	6.54	6.6	8.92	92.1	1552.6	8.76	5.1
17	2.54	24.0	571.6	5.34	14.4	2.94	47.5	627.9	5.23	12.5	3.64	94.8	680.0	5.20	10.6
18	2.04	9.4	584.4	4.52	14.7	2.21	9.4	560.1	4.91	15.3	3.07	54.9	710.3	7.25	11.0
19	2.31	19.9	579.3	5.26	14.4	2.57	23.0	622.1	3.73	13.3	3.51	98.4	653.8	4.80	10.8
20	2.80	11.4	679.2	5.97	12.6	2.87	10.9	678.0	4.53	12.6	3.82	75.4	811.4	8.36	9.4
21	3.10	49.9	684.8	6.39	12.1	3.25	102.2	688.9	6.34	10.3	3.96	153.1	773.3	6.84	8.6
22	3.06	49.1	665.4	7.46	11.8	3.14	36.3	685.2	8.51	11.8	3.83	86.6	887.9	9.14	8.6
23	5.01	22.8	835.4	6.91	10.0	5.23	34.3	895.5	7.37	9.2	5.78	90.0	1079.8	8.29	7.2
24	1.94	11.3	561.8	6.63	15.2	2.22	22.6	597.8	6.65	13.9	2.91	91.6	664.6	6.38	10.9
25	1.78	7.4	545.8	7.52	15.8	1.94	10.3	552.8	7.67	15.4	2.71	59.0	715.9	7.41	10.9
26	5.44	14.3	845.4	7.01	10.0	5.68	6.7	859.2	8.03	10.0	6.23	49.1	1070.0	8.91	7.6
27	2.54	35.7	617.3	6.86	13.0	2.93	59.6	681.9	6.97	11.3	3.62	132.8	785.9	6.94	8.8
28	2.47	11.9	655.0	7.21	13.0	2.78	16.3	641.9	7.78	13.1	3.45	48.7	840.0	6.98	9.6
29	4.16	21.2	766.1	6.89	10.9	4.49	17.4	817.8	6.89	10.3	4.94	70.1	976.3	7.58	8.1
30	2.10	24.4	569.1	6.79	14.5	2.27	25.1	612.0	6.76	13.5	3.11	116.7	666.6	5.80	10.3
31	2.17	23.4	566.9	6.59	14.5	2.17	16.8	564.8	8.08	14.8	2.95	66.1	738.5	6.96	10.4
32	5.13	22.1	843.4	6.64	9.9	5.59	11.4	864.7	8.69	9.9	5.81	65.6	1035.2	8.69	7.7
SUM	2.07	19.0	577.4	6.87	14.5	2.18	24.5	610.9	7.20	13.5	2.62	55.5	754.9	7.62	10.4
BAG	2.44	26.6	633.0	6.65	13.0	2.67	38.1	659.4	6.97	12.2	3.20	88.1	812.7	7.17	9.2
33	1.26	3.7	97.8	0.23	85.0	0.32	4.7	123.8	0.49	67.1	0.19	3.6	104.8	0.19	79.9
34	5.14	45.6	1173.3	1.07	7.1	2.17	35.9	1384.3	1.49	6.1	1.71	27.7	1297.8	1.07	6.6
35	1.34	25.1	838.3	1.07	10.1	1.43	29.7	859.1	0.93	9.8	1.43	36.1	848.8	1.01	9.8
36	1.51	32.6	600.6	0.85	13.5	1.35	27.3	607.7	0.78	13.6	1.66	32.8	610.2	1.03	13.3
37	1.61	14.9	377.3	2.03	21.9	1.63	11.8	427.6	2.66	19.7	1.64	6.4	444.6	4.86	19.3
38	0.90	5.0	458.6	5.30	18.9	0.86	3.8	500.7	5.32	17.4	1.47	7.0	588.0	9.50	14.7
39	1.16	9.3	540.2	11.16	15.9	1.06	7.1	575.0	11.88	15.1	1.27	10.9	818.9	8.99	10.6

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX G,CONT'D

LISTING OF LOADED VEHICLE TEST RESULTS ON

VEHICLE 091 1971 FORD TORI 302

DETROIT

MODE NO.	---- IWT=3500, RLHP=11.2 ----					---- IWT=4000, RLHP=11.2 ----					---- IWT=4500, RLHP=25.9 ----				
	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON
1	3.84	81.8	447.6	5.68	15.1	5.14	75.6	412.0	5.06	16.2	7.12	77.1	526.3	8.48	13.2
2	3.90	44.5	622.9	5.55	12.6	4.95	43.7	638.7	5.66	12.3	6.53	42.1	690.7	7.79	11.4
3	6.24	130.9	862.9	5.39	8.2	7.98	123.2	841.0	5.39	8.4	10.13	109.4	962.1	7.77	7.6
4	2.78	44.7	481.1	4.45	15.8	3.39	34.0	479.6	4.89	16.3	4.31	36.9	546.6	6.86	14.4
5	2.07	16.8	430.8	7.09	19.1	2.49	9.6	442.0	7.50	19.1	2.94	10.0	513.2	10.04	16.5
6	2.18	10.2	407.8	6.20	20.6	2.55	8.5	441.0	6.67	19.2	3.20	7.0	540.2	11.13	15.8
7	2.40	23.4	459.3	6.94	17.6	3.11	41.8	458.5	7.67	16.6	3.97	53.7	604.0	9.30	12.7
8	2.43	21.9	455.8	7.26	17.8	3.17	32.0	494.9	7.30	16.0	4.13	50.0	662.9	13.42	11.8
9	2.50	14.4	444.0	9.24	18.7	1.55	20.2	470.1	9.28	17.5	4.15	51.8	626.6	11.64	12.3
10	2.80	15.7	507.1	8.50	16.4	3.32	18.7	529.9	8.55	15.6	4.82	46.0	704.5	14.83	11.2
11	2.86	36.9	503.5	9.64	15.6	3.66	48.7	520.2	9.59	14.6	5.28	108.7	653.9	8.01	10.5
12	3.50	24.0	626.0	11.11	13.2	4.50	30.1	659.6	11.05	12.3	6.67	83.9	871.9	16.46	8.7
13	3.43	35.1	584.7	12.65	13.6	4.57	47.9	621.0	12.51	12.5	5.80	84.5	759.8	12.65	9.7
14	3.09	17.0	473.9	8.48	17.4	3.32	21.1	490.9	7.80	16.6	4.39	49.1	656.1	13.26	11.9
15	4.29	37.4	528.9	5.00	14.8	5.05	39.2	543.3	4.82	14.3	8.26	49.3	705.9	9.28	11.0
16	10.12	161.0	1038.5	6.52	6.7	11.81	139.6	1034.3	6.52	6.9	17.18	157.4	1235.9	12.36	5.8
17	3.45	46.5	503.4	10.69	15.1	4.30	42.6	513.3	10.69	14.9	5.04	55.7	618.1	12.52	12.3
18	3.12	22.0	483.0	8.47	16.8	3.43	20.2	506.5	8.07	16.2	4.44	28.5	632.2	11.50	12.8
19	3.14	32.9	472.1	9.27	16.6	3.43	34.2	483.4	9.30	16.2	4.04	39.2	639.1	12.54	12.4
20	3.64	27.3	561.0	9.09	14.4	4.14	28.9	616.1	9.21	13.2	5.07	32.8	774.1	14.69	10.5
21	3.73	81.7	552.2	8.83	12.5	4.45	90.5	572.9	8.80	12.2	5.25	113.5	660.0	8.63	10.4
22	3.85	39.5	571.0	8.70	13.8	4.11	48.2	597.9	7.83	12.9	5.52	86.9	770.1	13.85	9.6
23	6.25	81.1	730.7	16.02	10.1	6.12	73.2	760.4	11.37	9.9	7.51	105.8	894.9	15.04	8.2
24	2.70	13.7	481.4	10.56	17.4	3.10	16.5	500.5	10.55	16.6	3.55	51.6	579.4	9.16	13.2
25	2.47	11.7	462.8	8.52	18.2	2.93	11.4	490.0	8.17	17.2	3.52	41.1	624.3	12.05	12.7
26	5.36	50.8	751.0	7.75	10.5	7.69	37.9	802.6	7.50	10.0	6.81	65.4	934.1	11.03	8.4
27	3.03	26.1	537.7	11.93	15.1	3.98	24.2	594.7	13.64	13.8	4.09	67.8	688.5	11.22	11.0
28	3.14	21.9	535.3	8.76	15.3	3.48	19.9	557.9	8.82	14.8	4.15	48.2	711.2	13.47	11.1
29	4.79	70.0	656.9	9.29	11.3	5.72	62.9	692.8	10.32	11.0	5.85	81.8	796.1	13.28	9.4
30	2.42	13.9	473.7	11.01	17.6	3.05	21.9	503.9	10.03	16.2	3.35	52.3	574.1	8.71	13.3
31	2.56	11.5	486.8	8.61	17.3	3.23	18.3	501.0	7.97	16.4	3.79	50.6	643.6	12.42	12.1
32	5.44	49.5	780.9	8.18	10.1	6.71	47.8	805.2	7.99	9.8	7.27	90.1	926.3	12.16	8.1
SUM	2.66	22.8	499.1	7.75	16.3	2.99	24.9	516.9	7.67	15.7	3.74	41.1	649.3	11.44	12.2
BAG	3.14	27.7	534.7	8.52	15.1	3.56	32.7	562.3	8.50	14.2	4.35	67.4	697.9	10.06	10.9
33	0.60	17.4	74.6	0.13	85.4	0.71	17.8	78.3	0.26	81.7	1.01	18.7	113.6	0.95	60.7
34	7.76	226.1	946.1	1.06	6.7	9.07	228.2	952.5	2.07	6.6	9.98	195.1	953.9	1.06	6.9
35	3.77	72.0	624.6	0.53	11.8	4.22	87.9	579.0	0.50	12.2	4.88	63.9	658.3	0.85	11.5
36	2.42	21.5	543.9	0.76	15.2	2.81	28.9	537.2	0.71	15.0	3.02	21.5	537.6	0.74	15.3
37	1.39	4.2	396.4	1.56	21.8	1.32	4.3	425.6	2.03	20.3	1.34	3.5	445.1	1.95	19.5
38	1.76	3.6	404.3	5.33	21.4	1.63	3.7	389.4	4.74	22.2	2.10	4.1	502.0	9.61	17.2
39	1.81	4.6	462.6	8.18	18.7	1.68	4.5	467.4	7.79	18.5	2.08	4.8	656.7	16.79	13.2

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX G,CONT'D

LISTING OF LOADED VEHICLE TEST RESULTS ON

VEHICLE 094 1971 MERC MONT 400

DETROIT

MODE NO.	---- IWT=4500, RLHP=14.0 ----					---- IWT=5000, RLHP=14.0 ----					---- IWT=5500, RLHP=30.5 ----				
	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON
1	2.64	39.4	528.5	6.16	14.8	2.81	50.0	557.7	7.01	13.8	3.43	59.1	623.2	9.15	12.2
2	2.39	20.0	773.1	7.39	10.9	2.67	28.1	784.7	7.75	10.6	3.15	28.1	897.6	11.75	9.3
3	5.64	72.7	1139.0	7.49	7.0	4.90	80.2	1159.0	8.59	6.8	5.33	89.2	1264.3	12.30	6.2
4	1.99	24.4	596.3	7.18	13.8	2.20	29.1	623.9	10.15	13.1	2.35	29.1	662.5	12.25	12.4
5	1.47	8.9	542.2	10.04	15.8	1.70	20.3	539.0	11.53	15.4	1.67	12.1	617.6	10.53	13.8
6	1.43	6.3	520.8	8.50	16.6	1.60	10.5	514.1	8.10	16.6	1.65	9.8	659.6	12.73	13.0
7	1.84	23.6	592.5	10.92	14.0	2.19	38.2	621.4	11.34	12.9	2.73	80.1	682.4	13.02	10.9
8	1.62	15.7	588.0	10.40	14.4	1.75	30.5	571.4	8.63	14.2	2.02	62.0	798.0	14.21	9.8
9	1.77	12.8	574.8	11.43	14.8	1.86	18.8	576.7	12.20	14.5	2.24	43.1	752.9	16.71	10.7
10	1.98	11.6	639.8	11.23	13.4	1.97	15.6	633.3	9.69	13.4	2.17	38.5	901.2	16.65	9.2
11	2.12	32.2	650.0	11.85	12.5	2.19	35.5	677.4	14.07	12.0	2.43	51.8	813.7	16.96	9.8
12	2.55	16.6	819.4	14.01	10.4	2.58	21.0	798.8	12.47	10.6	2.61	54.3	1115.7	19.02	7.3
13	2.33	26.1	790.5	14.32	10.6	2.18	35.0	801.0	15.93	10.3	3.24	86.1	958.3	17.13	8.0
14	1.86	9.1	596.0	10.85	14.0	1.89	14.3	609.0	10.33	13.9	2.20	48.6	795.2	15.09	10.1
15	3.16	23.7	643.0	6.85	12.9	3.32	32.5	651.7	6.91	12.4	3.41	51.5	818.3	11.55	9.8
16	7.22	105.4	1315.8	9.48	5.9	7.73	133.6	1339.0	9.32	5.6	8.72	160.2	1601.4	15.61	4.7
17	2.25	31.8	611.8	11.16	13.3	2.39	41.4	644.5	11.93	12.4	2.48	47.2	762.3	13.77	10.5
18	1.88	12.8	652.0	10.65	13.1	2.05	19.3	667.7	11.05	12.6	2.14	18.0	862.6	16.42	9.9
19	2.06	22.8	576.2	10.28	14.3	2.29	39.0	591.8	10.83	13.4	2.22	34.9	704.5	14.21	11.6
20	2.38	16.8	788.1	12.52	10.8	2.68	26.6	783.3	12.98	10.6	2.54	25.0	1009.7	19.40	8.4
21	2.28	51.3	729.0	11.90	10.9	2.66	72.8	731.5	12.67	10.4	3.32	128.6	827.6	12.80	8.5
22	2.32	25.8	773.8	12.23	10.8	2.72	38.1	761.8	11.71	10.7	2.81	80.0	1000.6	16.14	7.8
23	4.24	59.6	958.5	14.28	8.3	4.83	69.0	470.3	17.13	8.1	4.51	97.4	1143.8	20.28	6.8
24	1.49	9.2	572.8	11.20	15.0	1.77	14.9	593.9	12.66	14.2	2.15	29.5	700.9	15.29	11.8
25	1.61	7.1	608.2	10.91	14.2	1.81	18.5	591.8	9.35	14.2	1.87	35.0	792.2	15.49	10.4
26	4.16	30.1	959.6	10.62	8.7	4.35	49.6	1351.2	9.69	6.2	4.46	59.1	1152.3	16.09	7.0
27	1.70	16.9	703.2	13.28	12.1	1.88	24.9	684.9	14.33	12.2	2.78	77.1	850.5	16.68	9.1
28	1.91	11.8	700.6	10.65	12.2	2.31	15.8	676.5	10.07	12.5	2.36	37.2	933.8	17.24	8.9
29	3.75	53.3	894.5	14.83	9.0	4.05	53.3	887.9	15.95	9.0	4.12	72.7	1103.6	22.52	7.2
30	1.51	12.0	640.0	13.50	13.4	1.78	14.5	624.2	13.88	13.6	2.52	41.5	726.7	15.82	11.1
31	1.68	8.9	592.9	10.71	14.5	1.89	13.8	599.7	10.39	14.1	2.08	51.6	792.7	14.59	10.1
32	3.43	40.1	947.3	11.40	8.7	4.17	41.8	928.4	10.86	8.8	4.40	74.4	1160.1	17.24	6.9
SUM	1.70	15.6	617.7	8.73	13.7	1.77	20.3	630.6	10.30	13.3	1.99	36.1	743.1	13.50	10.4
BAG	1.96	22.2	698.3	9.49	12.0	2.03	27.6	708.8	9.69	11.7	2.45	55.7	903.7	11.79	8.9
33	0.45	10.4	115.8	0.36	66.4	0.43	11.3	113.1	0.36	67.1	0.44	11.7	117.9	0.44	64.5
34	5.33	116.4	1290.6	1.90	6.0	4.88	117.3	1258.2	2.65	6.1	5.28	105.3	1322.1	2.65	5.9
35	2.58	53.5	688.3	0.69	11.4	2.44	63.6	652.1	0.61	11.7	3.15	76.6	730.9	2.14	10.3
36	1.40	18.6	576.5	0.71	14.5	1.00	12.1	621.0	0.90	13.8	1.36	12.9	624.9	1.06	13.7
37	0.88	2.6	427.9	2.26	20.4	0.92	3.7	451.2	2.95	19.3	1.25	4.2	491.4	4.58	17.7
38	1.06	4.4	496.1	4.67	17.5	0.98	3.4	482.2	7.64	18.1	1.40	4.6	651.1	14.83	13.4
39	1.04	4.4	519.1	6.25	16.8	0.81	3.8	558.0	11.54	15.7	0.67	5.3	779.8	12.60	11.2

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX G,CONT'D

LISTING OF LOADED VEHICLE TEST RESULTS ON

VEHICLE 100 1971 PONT GTO 400

DETROIT

MODE NO.	---- IWT=4000, RLHP=13.2 ----					---- IWT=4500, RLHP=13.2 ----					---- IWT=5000, RLHP=27.1 ----				
	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON
1	5.73	96.8	480.7	5.65	13.6	6.09	76.7	474.4	6.26	14.5	3.94	73.6	709.0	2.29	10.6
2	5.23	46.7	743.1	3.82	10.7	5.47	63.2	772.5	4.42	10.0	4.17	36.1	735.1	4.30	11.0
3	9.83	136.2	978.5	3.68	7.3	10.55	131.6	1022.7	4.13	7.0	8.25	104.3	1150.0	3.13	6.6
4	3.93	42.7	682.2	3.20	12.3	3.73	73.4	577.0	3.76	12.6	2.98	37.3	697.0	1.97	11.6
5	2.75	20.7	538.2	8.02	15.3	2.58	30.2	513.1	8.79	15.6	2.32	11.3	599.5	5.09	14.2
6	2.27	8.4	550.7	5.47	15.5	2.35	12.3	583.2	6.72	14.6	2.34	6.3	575.4	8.28	15.0
7	4.63	80.6	533.0	5.18	13.2	5.16	55.6	485.8	5.91	15.1	3.74	67.7	596.3	4.17	12.4
8	3.54	83.5	627.9	8.30	11.5	3.98	96.6	642.5	9.42	11.0	3.61	63.1	647.8	11.10	11.7
9	3.74	32.8	604.0	10.61	13.3	4.13	38.9	559.0	9.71	14.0	3.11	39.8	639.1	9.86	12.5
10	3.24	18.9	735.9	10.07	11.4	3.99	28.1	766.9	11.87	10.8	3.12	31.9	720.8	15.50	11.4
11	4.70	84.0	647.8	7.28	11.2	5.39	101.8	611.3	7.09	11.3	3.90	88.2	711.3	7.12	10.3
12	4.52	52.5	872.6	12.06	9.2	5.42	81.3	918.3	13.14	8.3	3.65	58.8	876.2	13.05	9.1
13	5.14	62.2	735.3	9.00	10.5	6.69	88.7	685.4	7.23	9.5	4.02	106.4	756.0	8.29	9.5
14	3.08	29.6	620.4	8.96	13.1	4.19	49.8	704.2	10.21	11.2	2.50	58.4	652.8	8.92	11.8
15	6.86	54.4	612.5	4.71	12.3	8.10	63.4	667.3	5.15	11.2	5.73	59.8	606.5	5.01	12.4
16	14.82	194.0	1232.6	5.45	5.6	22.13	190.4	1352.6	5.97	5.2	13.21	144.1	1261.2	6.49	5.8
17	4.04	70.6	359.7	7.44	18.4	5.07	68.1	566.0	7.47	12.9	3.66	61.2	633.7	7.33	12.0
18	3.55	23.6	662.3	8.00	12.5	4.14	27.1	710.5	8.38	11.6	3.31	27.9	714.3	7.45	11.5
19	4.17	53.1	578.0	6.48	13.2	4.66	51.7	550.1	7.60	13.7	3.62	41.7	647.1	6.61	12.3
20	4.53	31.0	793.0	9.16	10.4	5.07	32.6	592.0	9.40	13.5	3.82	29.9	847.1	7.93	9.8
21	6.30	137.9	633.3	4.65	10.2	7.15	185.6	541.0	4.57	10.4	5.15	147.7	656.7	4.52	9.8
22	5.07	86.8	764.8	9.90	9.7	6.50	107.3	862.9	10.91	8.4	4.75	102.9	768.4	10.32	9.4
23	8.94	123.7	852.1	8.34	8.3	10.76	137.5	770.2	9.25	8.7	8.35	114.1	916.5	7.99	7.9
24	3.39	29.1	569.2	10.18	14.2	4.41	38.1	508.5	7.47	15.2	2.54	53.3	605.2	7.25	12.7
25	2.91	21.4	637.2	9.62	13.1	4.03	31.7	551.3	9.47	14.5	3.12	46.6	657.0	15.50	12.0
26	9.62	79.7	852.3	7.20	8.8	11.26	84.9	962.9	7.08	7.8	8.68	80.6	870.9	10.74	8.7
27	4.27	55.4	654.0	10.95	11.8	5.39	65.6	624.4	8.75	11.9	4.60	73.6	670.2	12.76	11.1
28	4.11	38.0	725.0	9.42	11.1	5.42	35.2	813.4	10.29	10.0	4.22	37.6	743.1	8.56	10.9
29	8.34	111.4	761.8	7.69	9.2	9.48	121.1	857.7	8.72	8.2	6.91	95.5	849.7	7.12	8.7
30	3.66	34.5	578.2	8.68	13.8	4.92	52.0	515.0	6.28	14.5	4.05	73.6	621.1	14.21	11.8
31	3.52	36.3	671.0	7.62	12.0	4.89	65.6	714.3	7.97	10.7	3.86	81.2	643.5	5.11	11.3
32	9.69	89.6	873.0	6.04	8.5	11.50	123.1	938.8	6.34	7.6	7.94	109.2	841.5	5.30	8.5
SUM	3.85	41.9	615.6	9.04	12.8	3.95	49.7	623.0	8.93	12.	3.17	47.3	647.9	9.63	12.1
HAG	3.64	55.3	629.5	8.77	12.2	4.89	71.8	660.2	8.74	11.3	4.90	109.5	670.4	8.35	10.3
33	0.99	25.8	80.5	0.11	71.5	0.76	23.7	83.2	0.14	72.3	0.96	29.8	78.4	0.14	68.9
34	8.17	262.4	1010.5	0.58	6.1	7.54	248.4	1010.5	0.74	6.2	8.22	299.3	1010.5	0.69	5.9
35	3.74	116.4	624.4	0.32	10.8	3.77	113.4	650.7	0.34	10.6	3.69	135.7	650.7	0.48	10.1
36	2.00	47.5	643.0	0.49	12.3	2.38	56.2	638.3	0.53	12.1	2.42	58.3	626.5	0.55	12.2
37	2.44	26.4	332.2	1.35	23.3	2.27	19.7	408.0	1.52	19.9	2.08	6.7	425.7	2.42	20.0
38	1.55	4.7	506.1	6.75	17.1	1.70	20.7	529.5	6.78	15.6	1.41	4.5	509.1	7.79	17.0
39	1.45	6.3	610.4	16.38	14.2	1.31	6.4	599.6	15.84	14.5	1.58	7.1	616.2	16.61	14.0

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX G,CONT'D

LISTING OF LOADED VEHICLE TEST RESULTS ON

VEHICLE 107 1970 CHEV MONT 350

DETROIT

MODE NO.	---- IWT=4000, RLHP=13.2 ---- HC	CO	CO2	NOX	FUEL ECON	---- IWT=4500, RLHP=13.2 ---- HC	CO	CO2	NOX	FUEL ECON	---- IWT=5000, RLHP=29.0 ---- HC	CO	CO2	NOX	FUEL ECON
1	3.34	110.4	362.7	3.06	16.2	4.47	134.1	373.0	3.23	14.8	3.97	113.6	480.2	4.57	13.2
2	4.26	112.8	501.1	3.31	12.8	4.44	98.6	598.9	4.22	11.6	4.59	89.4	648.3	7.72	11.0
3	7.61	207.9	730.1	2.78	8.2	8.18	219.0	756.6	3.11	7.9	8.24	204.9	866.3	5.67	7.3
4	3.23	97.5	431.2	2.74	14.9	3.34	111.8	405.2	2.18	15.0	3.30	88.9	476.1	3.57	14.2
5	2.43	56.3	383.0	5.20	18.5	2.39	53.7	402.8	5.82	17.9	2.70	54.5	490.5	7.74	15.2
6	2.48	48.0	356.2	4.12	20.2	2.50	50.2	427.4	4.99	17.3	2.85	45.8	489.1	7.27	15.6
7	3.04	58.5	412.4	5.39	17.3	3.11	65.8	397.7	5.05	17.4	3.29	73.8	537.5	7.51	13.4
8	2.74	66.8	436.7	5.81	16.1	2.81	76.4	488.1	5.97	14.4	3.26	74.3	617.2	10.45	11.9
9	2.97	45.3	422.7	7.59	17.6	3.22	57.4	416.1	6.98	17.2	3.58	66.6	571.1	9.38	12.9
10	3.50	43.1	457.6	7.43	16.5	3.79	55.2	520.7	7.46	14.4	4.17	67.8	660.2	12.19	11.4
11	3.11	53.4	509.8	8.79	14.7	3.39	65.1	478.2	7.89	15.0	4.07	120.1	593.0	7.41	11.2
12	4.03	51.5	606.1	9.47	12.7	4.01	56.1	713.9	10.40	10.9	5.06	104.8	814.1	13.59	8.9
13	3.58	56.9	584.7	10.67	12.9	3.67	70.0	631.0	9.47	11.8	3.05	106.7	725.3	11.[illegible]2	9.8
14	2.97	40.4	451.9	5.06	16.9	2.89	49.2	453.3	6.65	16.4	3.52	58.4	610.7	10.51	12.4
15	5.38	77.6	429.6	3.82	15.6	5.96	97.2	431.2	3.56	14.7	5.94	72.8	565.6	7.77	12.7
16	12.17	256.1	855.1	4.65	6.8	13.27	298.2	886.0	4.00	6.4	13.71	268.9	1020.7	8.27	6.0
17	3.33	75.7	453.6	6.21	15.2	3.35	90.1	507.2	7.33	13.5	4.10	100.2	555.7	7.69	12.2
18	3.20	60.5	436.6	5.13	16.4	3.20	65.0	454.1	5.52	15.7	2.08	80.1	589.8	7.53	12.3
19	3.36	75.9	417.2	5.69	16.2	3.44	86.8	496.4	6.32	13.8	3.90	96.7	498.3	6.28	13.4
20	4.16	77.3	508.6	6.10	13.8	4.19	85.9	545.3	6.43	12.8	4.98	112.0	702.4	8.26	9.9
21	3.37	109.9	492.5	7.36	13.1	3.84	130.8	566.5	5.92	11.3	4.77	157.0	605.9	3.21	10.2
22	3.94	63.0	549.9	7.39	13.4	4.33	96.4	551.7	7.12	12.4	5.24	148.5	845.0	10.36	8.1
23	6.43	139.3	632.2	7.10	10.2	6.70	156.5	682.0	7.90	9.4	7.60	186.2	733.6	9.15	8.5
24	2.47	42.9	434.8	9.53	17.4	2.72	56.2	466.2	8.44	15.8	3.35	88.1	497.7	7.46	13.7
25	2.64	35.4	439.7	6.17	17.6	2.84	51.3	454.0	6.60	16.3	3.10	80.7	608.9	9.09	11.9
26	8.15	116.8	586.4	5.34	11.2	7.77	130.1	635.7	5.85	10.3	8.76	137.2	819.6	8.68	8.3
27	3.07	51.7	506.1	10.58	14.9	3.02	57.4	561.1	9.79	13.4	4.23	111.9	631.7	8.74	10.8
28	4.11	49.3	474.6	8.01	15.7	3.87	59.3	485.7	6.94	15.0	4.21	93.8	636.8	9.11	11.1
29	6.27	131.7	554.9	6.46	11.4	6.20	145.6	633.3	6.13	10.1	7.14	148.0	732.3	8.40	9.0
30	2.65	47.0	455.5	10.57	16.5	2.81	61.5	527.8	8.35	14.0	3.84	90.6	551.0	7.18	12.0
31	2.66	38.2	468.9	6.21	16.5	3.03	70.3	445.4	6.45	15.7	3.72	110.2	596.8	8.26	11.4
32	7.23	113.9	624.6	5.64	10.7	8.49	141.6	634.0	6.25	10.0	8.06	158.2	799.1	9.20	8.3
SUM	3.04	58.9	450.7	6.66	16.1	3.14	66.7	477.7	6.88	15.0	3.45	75.5	589.0	9.33	12.4
BAG	3.45	66.5	494.5	7.28	14.6	3.63	70.4	531.7	7.36	13.6	4.18	101.1	633.4	8.45	11.0
33	0.69	30.4	69.0	0.11	74.6	0.70	29.3	69.2	0.15	75.6	0.81	30.0	67.6	0.04	75.7
34	8.86	395.9	803.8	0.79	6.1	8.75	379.2	805.6	0.95	6.2	10.50	362.5	774.2	0.84	6.4
35	4.85	224.9	562.1	0.42	9.5	5.00	215.1	569.9	0.53	9.6	5.39	206.6	559.8	0.50	9.8
36	3.14	146.1	402.6	0.33	13.8	3.10	144.3	399.2	0.37	14.0	3.50	133.0	411.9	0.35	14.0
37	2.32	46.4	301.7	1.97	23.2	2.33	45.5	311.8	2.54	22.7	1.80	20.9	372.4	4.77	21.6
38	2.23	42.1	361.3	5.19	20.4	2.35	49.1	372.5	5.41	19.4	2.77	48.4	473.3	7.55	15.9
39	2.01	29.2	427.2	8.22	18.5	2.00	30.4	456.4	9.57	17.4	2.08	16.1	611.7	15.18	13.8

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX G,CONT'D

LISTING OF LOADED VEHICLE TEST RESULTS ON

VEHICLE 108 1970 CHEV IMPA 350

DETROIT

MODE NO.	---- INT=4000, RLHP=13.2 ----					---- INT=4500, RLHP=13.2 ----					---- INT=5000, RLHP=29.0 ----				
	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON
1	10.32	141.1	351.7	7.47	14.6	9.88	134.0	459.8	7.76	12.6	9.97	102.0	330.8	8.18	17.0
2	8.04	76.8	592.6	10.88	12.0	7.51	68.6	619.0	11.03	11.8	7.71	81.8	753.9	13.79	9.8
3	17.86	202.3	773.9	8.91	7.7	12.89	183.7	777.1	9.77	8.0	16.48	195.9	889.3	11.77	7.1
4	5.36	69.5	513.4	9.09	13.9	5.05	60.4	514.7	9.42	14.2	5.16	75.6	593.2	10.85	12.2
5	3.17	24.8	505.1	14.11	16.0	2.89	27.8	489.9	12.85	16.4	3.18	28.5	619.5	17.66	13.2
6	3.57	19.9	466.8	12.12	17.4	5.05	16.7	465.8	11.46	17.5	3.26	26.4	611.5	16.97	13.4
7	4.39	44.3	551.4	13.78	14.0	3.74	42.5	544.2	13.34	14.2	4.53	55.9	674.7	15.49	11.4
8	3.60	43.3	528.2	13.03	14.6	4.20	43.4	518.9	12.84	14.8	4.00	96.2	736.8	18.56	9.9
9	4.15	29.2	563.4	17.42	14.3	3.53	28.9	552.8	17.24	14.6	4.46	59.9	704.1	17.13	10.9
10	4.93	33.1	584.8	16.23	13.6	5.46	27.3	583.8	15.74	13.8	5.41	94.1	820.5	20.90	9.0
11	5.30	47.4	612.9	17.21	12.6	4.33	39.6	610.3	17.60	12.9	5.51	79.3	727.2	15.49	10.2
12	5.77	44.9	696.5	18.22	11.3	6.62	35.9	693.2	18.07	11.5	6.21	119.6	960.2	23.16	7.6
13	6.06	55.2	673.8	19.58	11.4	5.41	56.8	640.4	18.19	11.9	6.56	105.7	811.3	18.05	8.9
14	4.42	34.5	531.3	13.57	14.8	5.24	31.2	524.4	13.31	15.0	4.57	88.9	713.9	17.24	10.2
15	10.94	57.7	519.3	10.05	13.8	8.18	45.2	510.1	9.83	14.6	9.44	83.2	675.9	12.47	10.6
16	25.16	206.0	991.0	12.35	6.4	23.58	170.1	945.1	12.35	6.9	22.35	227.6	1156.9	16.00	5.6
17	6.86	73.5	519.7	12.95	13.5	5.24	60.7	520.8	14.01	14.0	4.97	71.4	605.0	15.31	12.1
18	5.35	39.6	564.8	13.76	13.8	5.86	25.9	551.0	13.68	14.5	4.71	44.9	733.8	19.50	10.8
19	6.30	56.2	523.2	12.20	14.1	5.13	41.1	536.9	13.44	14.4	5.30	51.5	604.6	14.75	12.6
20	6.81	44.5	662.9	16.63	11.8	6.80	28.4	650.9	16.01	12.4	6.07	54.6	860.1	22.61	9.2
21	6.11	103.9	605.4	13.38	11.3	4.40	83.6	606.2	13.38	11.8	6.37	136.1	697.8	11.07	9.5
22	6.19	59.9	662.7	15.62	11.4	6.43	50.3	643.1	15.40	12.0	6.23	158.2	858.2	19.28	7.9
23	12.82	125.2	781.4	16.77	8.7	12.51	106.8	765.3	17.49	9.1	12.12	170.4	962.2	20.06	7.0
24	3.88	32.7	543.9	16.83	14.6	3.95	29.3	533.6	17.10	15.0	4.39	57.4	642.4	15.18	11.9
25	3.86	31.3	527.1	13.99	15.1	3.78	24.5	532.2	13.73	15.2	5.15	94.7	737.2	17.10	9.8
26	13.22	71.5	752.5	15.04	9.8	13.42	58.5	750.5	15.36	10.0	13.57	118.8	1003.6	19.34	7.2
27	5.29	52.7	592.7	18.05	12.8	5.19	45.6	591.6	18.05	13.1	5.85	84.4	734.5	17.39	10.0
28	6.06	36.6	591.6	15.54	13.3	5.98	30.9	612.5	15.10	13.1	6.45	90.7	834.3	20.30	8.9
29	11.83	108.1	671.9	16.02	10.1	11.42	98.6	711.5	16.02	9.8	11.56	132.2	916.3	22.31	7.6
30	4.11	33.5	535.1	18.09	14.8	3.93	27.5	580.3	18.91	14.0	5.06	61.4	670.4	15.38	11.5
31	4.22	33.2	550.9	7.18	14.4	3.97	28.4	542.3	13.27	14.8	4.95	102.2	770.1	17.85	9.4
32	12.00	72.2	767.3	13.88	9.7	12.35	62.1	739.2	15.13	10.1	12.50	134.2	1014.2	19.01	7.0
SUM	4.66	44.6	559.6	14.37	13.8	4.53	40.5	558.9	14.32	13.9	4.98	71.1	729.0	17.53	10.4
BAG	5.60	47.9	590.2	12.71	13.0	5.45	50.9	581.0	12.84	13.1	5.75	105.4	775.6	14.34	9.3
33	1.58	29.3	48.2	0.22	89.4	1.60	28.1	70.4	0.93	74.2	1.75	32.1	56.0	0.41	79.3
34	18.30	329.0	889.0	4.25	6.1	15.39	362.9	670.9	0.64	6.9	18.92	357.0	641.0	0.80	7.0
35	5.79	121.1	644.2	0.56	10.4	5.99	136.4	571.5	0.80	11.0	6.89	133.5	588.8	1.04	10.8
36	3.65	76.7	464.9	0.71	14.9	3.52	75.2	452.2	0.53	15.3	3.42	67.8	512.1	0.90	14.1
37	3.73	21.9	425.4	8.32	18.8	3.75	23.0	415.1	7.44	19.2	2.26	9.1	517.4	12.00	16.5
38	2.04	11.2	501.7	14.68	16.9	2.01	10.5	483.3	13.76	17.5	2.28	24.7	654.3	19.73	12.7
39	2.20	25.3	552.1	16.58	14.8	2.19	26.2	549.8	16.30	14.8	3.77	46.5	797.8	21.86	10.1

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX G,CONT'D

LISTING OF LOADED VEHICLE TEST RESULTS ON

VEHICLE 114 1970 FORD LTD 351

DETROIT

MODE NO.	---- IWT=4000, RLHP=13.2 ----					---- IWT=4500, RLHP=13.2 ----					---- IWT=5000, RLHP=27.1 ----				
	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON
1	3.74	20.3	560.9	4.25	14.7	1.66	20.7	626.5	3.36	13.4	3.69	30.5	502.7	4.98	15.8
2	3.95	15.9	572.7	6.25	14.5	2.87	28.9	621.6	7.15	13.1	4.05	19.5	746.8	8.00	11.2
3	5.39	15.7	831.0	4.14	10.2	4.16	39.9	942.0	5.59	8.7	5.20	13.4	1003.7	6.92	8.5
4	2.04	17.7	364.4	1.75	22.3	2.30	23.2	553.5	2.98	14.9	2.41	14.1	563.6	5.78	15.0
5	1.73	16.8	439.9	4.51	18.8	2.14	20.7	490.6	5.02	16.7	2.22	21.8	520.3	8.90	15.8
6	2.45	15.6	452.7	9.43	18.3	2.18	18.4	456.2	9.27	18.0	2.54	17.7	538.2	10.22	15.5
7	2.32	51.5	409.2	3.62	17.8	3.38	53.8	518.3	4.41	14.5	3.23	103.6	554.3	7.63	12.1
8	3.41	51.4	513.4	7.97	14.7	2.96	46.2	516.2	9.27	14.8	3.37	60.9	677.8	11.24	11.3
9	3.16	39.1	478.7	5.37	16.1	3.22	32.8	519.5	7.18	15.3	3.63	85.9	622.5	9.94	11.5
10	4.00	30.2	532.6	14.09	15.0	3.43	31.2	553.1	11.36	14.5	3.98	45.4	716.0	12.50	11.1
11	2.30	56.9	514.6	3.10	14.5	3.80	69.2	579.2	4.56	12.7	4.03	139.3	637.8	6.40	10.2
12	4.55	42.3	656.6	17.60	12.0	4.22	53.1	701.9	14.32	11.1	5.00	74.9	885.6	13.91	8.7
13	3.37	52.8	655.8	5.15	11.8	4.09	61.9	605.1	7.27	12.4	4.54	120.4	733.4	9.48	9.5
14	3.39	30.5	497.6	13.70	16.0	2.99	36.2	521.5	9.71	15.1	3.56	52.6	648.6	10.34	12.0
15	6.39	34.6	514.5	9.38	15.1	3.88	36.1	532.9	5.50	14.7	4.32	23.8	626.1	6.89	13.1
16	12.42	34.0	1152.8	12.34	7.1	7.58	82.8	1094.5	6.49	7.1	6.04	10.4	1203.0	8.04	7.2
17	2.11	43.1	493.4	1.23	15.6	2.94	41.9	550.9	5.13	14.2	3.03	48.9	566.0	8.42	13.6
18	3.41	26.2	529.0	11.17	15.3	2.81	33.2	545.7	3.20	14.6	3.33	30.9	655.8	10.32	12.4
19	2.74	31.0	450.3	3.27	17.5	2.88	41.3	491.6	4.73	15.7	3.16	65.0	524.6	6.28	13.9
20	4.29	24.8	636.6	14.52	12.9	3.53	39.9	647.0	12.27	12.3	4.46	50.2	659.4	9.93	11.6
21	2.19	114.5	588.3	2.62	11.4	3.87	103.1	602.9	4.73	11.4	4.96	174.5	624.1	6.05	9.7
22	4.72	55.5	579.2	11.97	13.0	4.09	55.9	649.7	10.72	11.8	4.62	74.1	826.3	11.63	9.3
23	8.08	45.3	690.9	8.00	11.3	5.90	67.5	774.5	7.32	9.9	5.60	46.4	841.3	11.08	9.5
24	2.31	26.1	510.5	4.50	15.9	2.58	32.6	495.2	6.99	16.0	2.14	72.4	527.0	7.70	13.7
25	3.06	25.8	502.5	13.85	16.1	2.77	32.0	535.3	11.77	14.9	3.31	49.0	690.6	10.73	11.4
26	9.69	25.5	756.9	14.42	10.7	6.42	60.8	772.1	9.36	10.0	6.47	30.6	927.0	4.22	8.9
27	2.63	29.9	395.6	3.78	19.7	3.27	53.6	625.0	7.16	12.3	3.65	78.4	606.0	9.23	12.0
28	3.76	24.8	551.4	16.71	14.5	3.91	41.0	472.0	11.58	16.2	4.06	37.8	760.5	11.63	10.7
29	5.84	26.8	672.5	6.73	12.1	5.60	61.9	682.7	6.96	11.1	4.92	26.5	730.3	9.80	11.3
30	1.96	36.4	509.3	4.22	15.5	2.96	56.6	517.1	6.56	14.4	3.09	76.9	522.8	7.48	13.6
31	3.14	33.4	509.2	11.90	15.5	2.94	42.4	548.6	10.41	14.2	3.39	54.3	714.3	11.09	11.0
32	8.71	28.6	760.3	15.42	10.7	6.21	69.4	745.4	9.25	10.2	8.55	37.4	950.5	10.47	8.6
SUM	2.74	30.8	512.7	7.57	15.6	2.80	35.3	539.7	7.47	14.7	3.08	49.5	602.2	9.32	12.9
HAG	3.21	36.6	563.2	7.57	14.1	3.27	49.5	590.7	7.84	13.1	3.64	78.9	701.5	8.53	10.8
33	0.31	0.9	91.2	0.14	94.9	0.23	2.2	100.4	0.31	84.9	0.29	2.7	107.3	0.40	78.9
34	3.58	10.2	1094.7	1.06	7.9	0.62	9.9	1043.5	1.06	8.4	1.53	6.9	1087.1	1.37	8.0
35	0.85	5.5	701.0	0.85	12.5	0.26	5.6	667.8	0.66	13.1	0.51	2.6	647.4	0.61	13.8
36	0.85	9.0	608.4	1.08	14.2	0.25	5.9	624.8	0.92	14.0	0.45	3.4	617.2	0.92	14.2
37	1.02	4.2	398.4	2.33	21.7	0.82	3.4	383.5	2.20	22.7	1.21	3.2	416.9	3.49	20.8
38	1.87	17.6	417.9	7.14	19.7	2.66	23.5	540.3	10.51	15.2	2.28	21.4	506.1	9.20	16.2
39	2.18	26.5	473.2	9.10	17.0	2.20	23.3	449.6	8.10	18.0	2.36	28.2	475.0	12.62	16.8

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX G.CONT'D

LISTING OF LOADED VEHICLE TEST RESULTS ON

VEHICLE 115 1970 FORD LTD 390

DETROIT

MODE NO.	---- INT=4000, RLHP=13.2 ----					---- INT=4500, RLHP=13.2 ----					---- INT=5000, RLHP=29.0 ----				
	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON
1	3.94	52.1	452.0	3.35	16.2	3.96	30.4	463.7	4.08	16.9	3.78	31.9	497.6	5.14	15.9
2	3.91	46.7	723.8	3.63	11.0	3.98	17.6	774.5	4.36	10.9	3.74	28.9	818.3	5.93	10.1
3	6.64	89.0	927.2	3.12	8.2	6.30	47.3	932.1	3.91	8.6	6.14	65.1	1012.6	5.47	7.8
4	2.93	39.6	517.8	2.71	15.1	2.80	20.9	543.7	3.33	15.2	2.96	33.2	577.8	4.24	13.9
5	2.23	27.9	480.6	4.10	16.7	2.15	14.9	515.9	4.61	16.3	2.38	25.8	554.8	6.27	14.7
6	2.09	28.7	496.7	3.23	16.2	2.13	19.1	516.0	3.69	16.1	2.58	36.0	644.0	6.05	12.5
7	2.65	44.9	517.0	5.68	14.9	2.96	57.9	547.7	4.74	13.7	3.64	76.8	561.1	5.57	12.8
8	2.24	43.0	564.0	4.29	13.9	2.68	62.1	578.3	3.92	13.0	3.23	91.2	818.8	8.12	9.1
9	2.39	31.1	507.3	5.66	15.7	2.74	35.8	536.2	5.79	14.8	3.80	74.3	655.6	7.45	11.3
10	2.69	35.3	599.9	4.57	13.4	1.83	32.3	642.0	5.28	12.7	3.76	80.0	873.2	8.99	8.8
11	2.82	45.7	543.7	6.90	14.2	3.03	42.3	597.4	7.44	13.2	4.29	114.9	639.7	5.51	10.6
12	3.24	48.3	741.7	6.05	10.7	3.38	39.0	786.0	7.17	10.3	5.18	137.9	1049.9	9.28	6.9
13	3.26	44.2	663.6	8.90	11.9	3.57	46.2	688.4	9.03	11.5	5.15	119.4	768.6	7.20	9.1
14	2.32	32.2	551.9	4.67	14.6	2.51	31.1	581.1	5.20	13.9	3.53	87.2	775.8	6.55	9.6
15	3.62	28.9	592.8	2.87	13.7	3.72	19.1	622.2	3.23	13.4	4.42	54.4	749.2	4.75	10.5
16	8.04	86.0	1120.7	3.63	6.9	7.87	34.3	1163.0	3.89	7.1	9.21	94.9	1340.3	5.96	5.8
17	3.12	48.0	525.1	5.64	14.5	3.02	32.8	562.7	6.63	14.2	3.44	41.4	611.9	8.59	12.9
18	2.73	42.8	561.0	3.67	13.9	2.64	33.7	601.1	4.39	13.4	3.14	49.1	717.6	6.89	11.0
19	2.80	38.0	545.1	5.35	14.5	2.73	34.5	557.7	6.45	14.3	3.44	45.8	639.5	7.43	12.3
20	3.33	48.1	668.9	4.49	11.8	3.38	47.2	692.4	5.27	11.4	4.15	66.2	881.7	7.96	8.9
21	3.31	70.7	599.6	6.81	12.3	3.84	121.5	603.2	5.26	11.0	4.80	139.1	635.5	5.62	10.2
22	3.21	54.1	668.4	4.91	11.6	3.70	80.5	709.6	5.07	10.5	4.36	117.1	908.6	8.34	8.0
23	5.32	71.9	776.1	6.16	9.8	5.78	84.0	807.5	6.00	9.3	6.13	96.5	936.7	5.76	8.0
24	2.29	31.9	530.9	6.61	15.1	2.44	34.8	571.6	7.05	14.0	3.22	56.1	631.5	7.29	12.2
25	2.08	34.3	553.6	4.53	14.5	2.29	35.6	597.8	5.26	13.4	2.98	64.1	772.9	8.37	10.1
26	4.82	41.9	855.0	4.29	9.5	5.12	45.4	870.0	4.93	9.3	5.72	61.6	1069.1	7.39	7.5
27	2.57	39.0	601.5	7.86	13.2	2.94	46.5	643.8	9.20	12.2	4.11	87.5	735.2	8.56	10.0
28	2.73	38.0	617.6	5.00	12.9	3.15	40.1	637.8	5.37	12.5	3.66	62.1	875.9	9.21	9.0
29	4.69	57.8	718.9	5.12	10.8	4.90	60.3	739.2	5.99	10.4	5.49	68.0	887.6	7.97	8.8
30	2.27	31.7	545.6	7.33	14.7	2.39	31.5	545.7	7.35	14.7	3.33	66.0	644.6	7.23	11.7
31	2.20	34.7	560.9	4.76	14.3	2.54	45.2	608.9	3.60	12.9	3.19	75.1	776.6	8.05	9.8
32	4.65	44.1	837.4	4.98	9.6	5.46	61.8	882.8	5.36	8.9	5.89	76.9	1074.4	7.69	7.3
SUM	2.31	36.9	563.6	4.60	14.1	2.47	38.8	593.3	5.02	13.4	3.14	64.9	723.1	7.48	10.6
BAG	2.50	40.4	609.3	5.51	13.0	2.88	51.9	646.2	6.43	12.0	3.52	93.8	772.4	7.41	9.5
33	0.54	10.5	77.8	0.09	92.4	0.52	10.1	79.0	0.14	92.1	0.58	12.8	105.1	0.49	69.9
34	4.53	72.1	964.8	0.58	8.1	4.82	67.5	979.1	0.63	8.1	5.10	79.3	977.4	0.79	7.9
35	2.01	26.4	649.7	0.42	12.7	1.99	13.2	677.3	0.61	12.6	2.21	20.8	673.1	0.79	12.5
36	1.36	18.5	544.7	0.53	15.4	1.53	14.6	580.2	0.76	14.6	1.70	21.5	554.2	0.74	15.0
37	0.76	6.4	448.2	1.35	19.3	0.91	5.5	472.4	1.78	18.3	1.42	10.5	524.1	2.75	16.3
38	1.38	23.6	461.5	2.78	17.6	1.65	29.2	486.1	3.21	16.5	2.49	44.2	580.8	6.37	13.5
39	1.61	37.4	521.3	4.37	15.2	1.69	36.7	544.4	5.03	14.5	1.79	51.9	735.9	10.95	10.8

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX G.CONT'D

LISTING OF LOADED VEHICLE TEST RESULTS ON

VEHICLE 116 1970 MERC MARA 429

DETROIT

MODE NO.	---- INT=4500, RLHP=14.0 ----					---- INT=5000, RLHP=14.0 ----					---- INT=5500, RLHP=30.5 ----				
	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON
1	3.28	83.7	523.7	7.22	13.3	3.17	86.0	596.6	5.88	12.0	3.30	89.9	571.8	5.03	12.3
2	2.74	32.1	767.4	4.36	10.7	2.72	37.0	765.7	5.15	10.7	3.01	39.4	841.6	6.79	9.7
3	4.95	115.0	1116.3	4.58	6.8	3.78	153.3	1074.5	6.93	6.7	5.26	122.6	1154.8	5.92	6.5
4	1.87	19.1	630.2	4.29	13.3	1.89	23.8	662.0	5.87	12.6	2.10	18.5	713.2	6.13	11.8
5	1.60	9.2	525.0	8.13	16.3	1.68	10.6	563.9	7.54	15.1	1.92	8.5	647.4	9.12	13.3
6	1.76	8.4	505.6	5.61	16.9	1.71	135.4	25.6	6.16	36.4	1.99	11.9	650.2	10.12	13.1
7	2.71	59.2	532.5	7.08	14.0	2.78	69.1	567.4	6.33	13.0	3.24	77.5	662.8	8.16	11.2
8	2.60	46.7	561.5	6.67	13.8	2.74	63.2	576.6	7.07	13.0	3.45	79.1	774.1	11.40	9.8
9	2.85	25.9	526.7	10.56	15.4	3.04	42.2	563.6	8.69	13.9	3.88	82.4	704.6	10.90	10.5
10	3.03	21.7	596.7	8.03	13.9	3.34	32.6	596.0	8.30	13.5	3.89	67.4	834.6	12.08	9.3
11	2.94	35.5	620.7	11.19	12.9	4.14	116.8	641.6	6.98	10.6	5.23	171.4	716.2	5.82	8.9
12	3.78	33.2	786.2	9.92	10.4	4.25	66.0	772.7	9.89	10.0	6.06	145.3	1032.9	12.84	6.9
13	3.63	45.8	719.3	13.01	11.1	4.27	92.8	755.3	11.01	9.7	5.89	179.1	840.4	9.22	7.8
14	2.65	23.4	590.5	7.53	14.0	2.08	40.4	577.6	7.96	13.7	4.26	93.4	761.9	10.80	9.6
15	3.93	25.5	641.5	4.06	12.8	4.02	33.1	629.3	4.49	12.8	4.93	60.4	784.1	6.54	9.9
16	7.73	88.0	1349.7	4.80	5.9	7.69	89.7	1338.4	5.84	5.9	6.22	89.7	1587.9	11.16	5.1
17	2.71	46.2	571.9	8.57	13.6	2.85	47.7	399.2	9.65	18.4	3.44	63.3	684.3	10.18	11.2
18	2.52	23.2	633.4	7.65	13.1	2.62	20.6	667.2	8.39	12.5	3.73	43.4	796.5	10.47	10.1
19	2.19	31.3	583.7	7.27	13.9	2.41	29.6	610.9	8.07	13.3	3.24	74.5	651.2	6.81	11.4
20	3.16	28.8	756.8	8.43	10.9	3.43	29.4	771.9	9.00	10.7	4.97	95.0	905.0	9.94	8.3
21	3.48	108.6	643.7	7.91	10.8	4.30	150.8	685.7	7.30	9.5	5.34	212.6	773.3	6.53	7.9
22	3.85	60.9	701.6	8.27	11.0	4.39	89.5	721.5	8.09	10.1	5.32	146.1	911.8	11.48	7.7
23	5.87	80.7	814.9	9.43	9.2	6.58	95.8	903.4	9.94	8.3	6.80	119.8	1041.7	12.91	7.1
24	2.20	17.3	560.8	9.90	14.9	2.46	21.2	596.6	9.70	13.9	3.52	87.9	651.6	8.06	11.1
25	2.45	22.0	578.1	7.91	14.3	2.64	26.1	591.3	8.45	13.9	3.69	88.5	755.8	10.69	9.8
26	5.53	38.6	901.8	6.13	9.1	5.78	42.8	880.3	6.64	9.2	6.35	79.8	1111.4	9.16	7.1
27	2.75	32.8	657.1	11.81	12.4	3.24	45.7	673.1	11.10	11.8	4.00	98.1	791.7	11.44	9.3
28	3.29	31.9	652.2	8.14	12.5	3.76	34.4	641.2	8.65	12.6	4.31	48.3	653.1	11.63	9.4
29	4.84	72.0	774.5	9.35	9.8	5.89	90.9	779.9	8.78	9.4	5.92	88.5	950.7	11.97	8.0
30	2.16	20.9	596.9	10.43	13.9	2.67	39.3	620.4	9.46	12.9	3.85	118.7	653.5	6.92	10.4
31	2.63	32.4	615.3	8.56	13.2	2.86	45.5	613.2	8.43	12.8	4.01	108.8	780.7	10.29	9.2
32	5.34	42.6	949.1	6.72	8.6	5.69	50.9	916.1	6.60	8.8	7.07	96.5	1095.7	9.00	7.0
SUM	2.48	29.8	601.7	7.89	13.5	2.70	43.3	601.3	7.78	13.1	3.39	68.7	739.3	9.74	10.3
RAG	3.05	38.4	656.4	8.26	12.2	3.40	58.3	680.9	8.23	11.3	4.29	114.0	820.2	9.27	8.8
33	0.72	20.2	120.0	0.13	57.6	0.69	24.6	95.4	0.03	65.1	0.75	25.2	105.1	0.07	60.4
34	6.77	241.6	1157.5	1.59	5.7	7.41	295.3	1151.0	1.11	5.4	8.20	322.5	1150.6	1.53	5.3
35	1.28	20.7	904.2	1.32	9.4	1.87	53.3	869.4	1.22	9.3	2.43	63.5	824.4	1.08	9.5
36	0.38	4.6	783.0	1.22	11.2	0.25	2.6	755.9	1.30	11.7	0.32	2.8	800.2	1.18	11.0
37	0.65	3.2	457.5	1.38	19.1	0.63	3.5	452.4	1.32	19.3	0.88	3.8	482.2	2.02	18.1
38	1.38	4.6	457.8	6.74	18.9	1.40	5.2	463.7	6.71	18.6	2.20	11.9	571.2	10.46	14.9
39	2.09	17.8	518.7	9.60	16.0	2.21	20.5	538.2	10.22	15.4	2.34	22.2	713.3	14.50	11.7

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX G,CONT'D

LISTING OF LOADED VEHICLE TEST RESULTS ON

VEHICLE 118 1970 OLDS 98 455

DETROIT

MODE NO.	---- IWT=4500, RLHP=14.0 ---- HC	CO	CO2	NOX	FUEL ECON	---- IWT=5000, RLHP=14.0 ---- HC	CO	CO2	NOX	FUEL ECON	---- IWT=5500, RLHP=30.5 ---- HC	CO	CO2	NOX	FUEL ECON
1	2.44	13.3	533.5	5.04	15.8	2.23	6.6	676.9	5.71	12.8	2.86	34.0	723.9	4.81	11.3
2	2.66	20.0	786.8	5.46	10.7	2.28	7.2	788.4	5.76	11.0	3.10	35.6	889.4	7.58	9.3
3	4.24	22.1	1168.9	5.59	7.3	3.74	11.8	1218.3	6.04	7.1	4.48	33.7	1317.0	7.60	6.4
4	1.87	10.4	617.4	5.78	13.9	1.67	4.6	645.9	6.00	13.5	1.87	13.2	717.8	7.14	11.9
5	1.44	8.9	448.2	8.32	19.0	1.33	3.9	560.7	8.54	15.5	1.73	12.5	630.1	10.06	13.5
6	1.63	5.6	511.8	6.38	16.9	1.32	3.5	519.4	6.06	16.8	1.69	9.6	660.9	9.30	13.0
7	2.51	58.2	564.5	8.32	13.4	1.59	93.3	578.8	6.14	12.2	3.61	126.2	667.3	7.28	10.1
8	1.71	34.8	537.1	8.01	14.9	2.16	58.0	558.5	7.27	13.5	2.76	113.8	743.0	9.36	9.5
9	2.13	19.3	568.0	11.62	14.7	2.31	30.1	579.4	10.72	14.0	3.15	96.3	704.3	10.14	10.3
10	2.25	10.9	610.0	9.51	14.0	2.47	13.6	605.1	9.76	14.0	2.80	62.2	852.9	11.76	9.2
11	2.18	20.2	651.8	12.01	12.9	2.69	48.5	670.5	10.60	11.8	4.08	184.3	729.5	6.05	8.6
12	2.81	15.8	743.4	11.57	11.4	2.96	27.1	777.5	11.24	10.7	3.72	131.4	1003.2	12.07	7.3
13	2.68	30.5	753.6	12.53	11.0	2.90	36.5	787.1	12.48	10.4	4.25	219.0	869.9	8.41	7.2
14	1.99	15.2	560.9	9.45	15.0	1.99	15.5	581.0	9.37	14.5	2.83	81.4	773.0	10.46	9.8
15	2.92	15.6	615.0	5.94	13.7	2.80	12.1	635.2	6.11	13.4	3.56	53.5	817.6	7.94	9.7
16	6.02	22.2	1260.0	7.53	6.8	5.76	15.4	1301.7	7.92	6.6	8.28	73.5	1687.3	10.38	4.9
17	2.02	10.2	620.7	8.60	13.8	1.99	5.5	635.2	8.85	13.6	2.59	38.7	730.7	9.94	11.1
18	1.92	10.6	708.8	10.94	12.1	1.92	4.7	676.4	9.49	12.9	2.33	19.6	871.1	13.81	9.8
19	1.86	15.3	623.9	8.07	13.6	1.82	4.4	593.9	8.21	14.6	2.25	32.3	731.0	9.33	11.3
20	2.39	29.4	837.4	11.54	10.0	2.37	6.5	821.5	11.05	10.6	2.75	34.9	1000.3	12.15	8.3
21	3.22	154.1	670.9	6.24	9.6	3.41	177.7	676.8	5.69	9.2	3.77	218.3	790.1	7.67	7.8
22	2.99	89.1	759.3	10.72	9.8	3.10	80.0	722.0	9.41	10.3	3.67	122.9	922.2	11.94	7.9
23	3.76	51.8	1021.3	12.12	8.0	3.56	42.6	1026.2	10.29	8.0	4.37	73.7	1200.7	13.08	6.7
24	1.84	20.0	619.1	10.48	13.5	1.71	16.7	621.0	9.57	13.6	2.56	78.5	692.0	8.87	10.8
25	1.68	13.9	628.6	11.17	13.5	1.82	9.1	590.2	10.70	14.5	2.31	63.0	757.1	11.34	10.3
26	3.73	25.1	974.9	11.38	8.6	4.17	12.5	912.5	9.36	9.4	4.57	59.2	1116.2	11.89	7.2
27	2.20	35.4	705.3	11.79	11.6	2.18	24.1	699.9	10.86	11.9	3.27	122.6	779.6	8.51	9.0
28	2.18	15.8	754.9	11.91	11.3	2.34	10.2	697.0	10.48	12.3	2.91	59.3	869.8	12.23	9.1
29	3.11	15.0	945.2	12.15	9.1	3.24	7.5	917.0	10.39	9.5	3.64	28.8	1095.1	13.12	7.7
30	2.10	39.6	635.3	10.19	12.6	1.99	31.1	622.5	9.58	13.1	3.33	135.3	674.4	7.55	9.9
31	1.95	29.4	627.5	10.19	13.1	2.02	26.2	601.1	8.94	13.7	2.54	94.3	757.2	9.06	9.7
32	2.44	39.3	982.0	10.08	8.4	4.11	28.6	932.3	9.31	9.0	4.66	91.2	1110.4	9.86	7.0
SUM	1.92	21.2	635.3	9.83	13.2	1.90	21.9	618.9	9.13	13.5	2.43	61.5	778.5	10.23	10.1
BAG	2.08	31.4	697.9	8.19	11.8	2.15	35.7	692.2	7.88	11.8	2.84	104.9	842.4	7.96	8.7
33	0.26	1.0	114.2	0.36	76.1	0.24	1.0	114.1	0.22	76.2	0.33	5.4	135.9	0.53	61.1
34	3.12	10.7	1271.3	2.27	6.8	3.69	10.4	1283.4	1.69	6.8	2.78	13.2	1341.4	2.12	6.5
35	1.39	7.9	963.3	1.32	9.1	1.08	7.8	895.5	0.93	9.7	1.33	13.1	972.4	1.19	8.9
36	1.04	6.0	646.9	1.02	13.5	0.70	4.2	580.8	0.62	15.1	0.85	7.6	660.1	0.88	13.2
37	1.22	9.4	464.2	2.99	18.4	1.14	8.9	414.9	2.21	20.5	1.66	11.7	514.0	5.38	16.5
38	1.50	4.0	518.5	9.66	16.8	1.34	4.4	496.7	8.34	17.5	1.51	3.9	640.4	13.25	13.6
39	1.25	3.8	578.5	13.45	15.1	1.16	3.3	538.4	13.01	16.2	1.09	4.9	794.0	13.81	11.0

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

```
                                APPENDIX G,CONT'D

                    LISTING OF LOADED VEHICLE TEST RESULTS ON

                         VEHICLE 130  1969  CHEV  MALI  350

                                     DETROIT

       ---- INT=3500, RLHP=11.2 ----     ---- INT=4000, RLHP=11.2 ----     ---- INT=4500, RLHP=25.9 ----
MODE                           FUEL                               FUEL                               FUEL
NO.    HC     CO    CO2   NOX  ECON      HC     CO    CO2   NOX  ECON      HC     CO    CO2   NOX  ECON
------------------------------------------------------------------------------------------------------
 1    8.90 126.8  471.8  5.88 12.7      7.10 118.1  496.7  6.43 12.6      9.00 130.8  586.7  8.86 10.8
 2    8.16  85.7  507.7  5.94 13.3      6.87  82.3  572.5  7.27 12.3      8.10  70.6  621.4 10.67 11.7
 3   13.62 199.8  806.8  2.01  7.6     11.35 199.7  867.4  7.82  7.3     13.52 204.4  947.9 13.72  6.8

 4    5.38  71.0  454.3  1.14 15.2      4.56  66.1  492.8  7.45 14.5      5.30  70.4  550.6  9.27 13.1
 5    3.54  33.1  419.3  7.35 18.4      3.18  31.6  424.3  8.34 18.3      3.56  25.8  524.2 11.99 15.4
 6    3.24  20.5  371.7  5.31 21.4      2.99  24.4  386.5  6.32 20.4      3.69  24.8  496.1 10.82 16.2

 7    2.47  30.9  480.3  9.60 16.5      3.45  52.5  466.6  7.96 15.8      4.35  66.5  589.3  9.48 12.5
 8    3.27  23.7  414.0  8.35 19.2      3.51  39.5  431.2  7.38 17.6      5.13  80.3  589.4 11.34 12.1
 9    3.18  19.5  443.9 10.20 18.3      3.22  26.4  463.7 10.00 17.2      4.87  49.1  607.2 13.27 12.7

10    3.87  24.0  460.6  9.81 17.4      4.19  31.2  465.7  9.50 16.9      6.22  58.1  661.0 14.63 11.5
11    3.68  34.8  530.6 11.85 14.9      3.74  40.6  548.1 12.19 14.2      4.98  64.4  673.4 12.76 11.2
12    4.70  33.6  564.0 12.13 14.0      5.23  39.7  599.7 12.73 13.1      7.08  60.9  817.3 18.06  9.5

13    4.27  43.2  582.9 14.24 13.4      4.50  44.7  632.9 14.64 12.4      5.87  64.9  802.3 15.66  9.6
14    3.45  21.6  420.0  9.23 19.1      3.50  24.5  443.0  9.42 18.0      5.27  50.1  631.8 14.04 12.2
15    5.87  65.9  457.7  5.54 15.3      5.24  61.0  503.9  6.81 14.4      7.50  70.7  643.0 11.54 11.4

16   14.18 237.6  979.7  7.27  6.3     13.18 224.8 1050.8  8.70  6.1     17.47 250.2 1226.1 14.61  5.3
17    4.31  61.8  497.7 10.33 14.6      3.98  60.3  532.9 11.80 13.9      5.05  66.7  623.2 13.42 11.9
18    5.19  36.7  435.4  8.00 17.4      3.71  37.2  483.6  9.26 16.0      4.81  31.4  591.8 13.62 13.5

19    5.35  56.4  491.6  9.49 14.9      3.86  53.6  516.6 10.68 14.5      4.65  55.4  610.9 12.39 12.5
20    6.37  45.4  534.4  8.14 14.2      4.53  47.1  572.0 10.35 13.4      6.16  50.5  712.7 14.92 10.9
21    3.92  52.5  588.3 12.06 13.0      4.12  84.3  593.6 10.05 12.0      5.50 130.2  691.3  8.26  9.7

22    4.47  38.1  547.5  9.01 14.3      4.82  53.8  579.0 10.09 13.1      7.10 108.3  757.0 13.63  9.3
23    8.85 102.2  704.7 11.89  9.9      7.06 108.5  749.6 12.80  9.4      9.72 144.1  903.4 16.12  7.6
24    3.09  27.6  433.1 10.42 18.2      3.11  27.0  464.5 10.82 17.2      3.88  35.0  579.1 12.27 13.7

25    3.33  21.7  413.8  8.62 19.4      3.40  24.3  436.6  9.41 18.3      5.01  52.4  592.8 12.20 12.8
26    7.49  91.1  663.2  7.78 10.7      8.56  88.4  707.6  9.36 10.2     10.49 108.6  876.4 21.17  8.2
27    3.57  39.4  516.4 12.83 15.0      4.08  38.7  548.4 12.64 14.3      5.25  77.8  691.9 11.89 10.7

28    4.34  35.2  481.5  8.86 16.1      4.77  40.5  506.3 10.14 15.2      6.54  65.1  700.6 14.88 10.8
29    6.42 102.8  628.4 10.61 11.0      9.17 101.1  665.4 11.41 10.4      8.69 117.1  804.7 14.80  8.7
30    3.01  29.9  425.2 10.48 18.4      3.07  29.9  493.6  9.59 16.1      4.09  55.9  567.4 10.08 13.3

31    3.41  22.3  436.7  9.48 18.4      3.49  26.2  482.1 10.10 16.6      5.28  77.0  613.2 11.99 11.8
32    8.61  95.9  690.1  9.25 10.3      8.56  84.5  730.3 10.97 10.0     10.90 129.2  916.1 15.84  7.7


SUM   3.81  38.3  464.9  9.00 16.5      3.77  43.5  475.0  9.03 16.0      4.91  53.2  627.1 13.39 12.2
HAG   3.78  37.2  500.0  8.42 15.6      3.94  42.2  531.3  8.84 14.5      5.27  71.2  678.4 10.14 11.0


33    1.19  29.6   78.0  0.22 69.1      1.08  31.8   83.7  0.28 64.7      1.11  33.9   76.0  0.33 65.8
34   13.85 355.5  911.3  1.38  5.9     13.00 383.9  891.2  1.16  5.8     13.34 383.9  829.4  1.38  6.0
35    7.44 180.6  458.8  0.56 11.6      6.53 199.0  644.6  0.66  9.1      6.81 204.7  461.8  0.53 11.0
36    5.17 125.1  508.2  1.85 12.3      4.39 130.8  445.1  0.41 13.4      4.48 132.7  445.4  0.49 13.3

37    3.04  36.0  315.2  1.83 23.3      3.21  50.4  313.5  1.65 22.0      2.88  13.8  348.9  7.59 20.7
38    1.97   6.9  377.0  6.74 22.5      1.95   9.3  400.6  7.07 21.1      2.74   9.0  516.3 14.37 16.5
39    2.61  11.7  425.2 11.46 19.6      2.48  12.3  389.7 10.61 21.3      3.81   9.5  641.3 18.61 13.3


    EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
    FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

    FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO
```

APPENDIX G,CONT'D

LISTING OF LOADED VEHICLE TEST RESULTS ON

VEHICLE 131 1969 CHEV STAW 350

DETROIT

MODE NO.	---- IWT=4500, RLHP=14.0 ----					---- IWT=5000, RLHP=14.0 ----					---- IWT=5500, RLHP=30.5 ----				
	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON
1	3.17	90.3	470.8	6.64	14.3	3.57	95.8	429.3	6.91	15.0	3.85	96.7	430.6	8.34	14.9
2	3.95	52.7	645.8	9.75	12.0	4.04	60.1	701.7	10.89	11.0	4.11	42.9	792.1	12.58	10.2
3	7.09	158.5	946.3	10.89	7.3	7.32	171.0	987.8	11.79	6.9	7.38	155.6	1035.3	12.93	6.8
4	2.89	42.8	548.0	11.62	14.2	3.17	53.1	517.6	10.98	14.5	3.10	52.5	548.2	11.98	13.9
5	2.14	11.0	508.9	13.21	16.7	2.17	13.2	504.2	13.46	16.7	2.36	15.4	579.7	15.51	14.5
6	2.23	11.3	454.8	9.08	18.5	2.17	10.6	485.2	10.01	17.5	2.52	12.7	616.1	14.11	13.8
7	2.56	34.1	551.6	12.06	14.5	2.68	44.3	538.2	11.72	14.4	3.03	51.5	630.6	12.81	12.3
8	2.52	30.3	504.6	10.46	15.8	2.67	47.5	534.5	10.43	14.4	3.18	81.6	737.8	14.76	10.1
9	2.42	17.2	524.7	14.25	15.9	2.60	27.3	522.4	13.90	15.5	3.10	56.9	649.3	14.79	11.9
10	2.78	15.6	555.6	12.94	15.1	2.95	24.1	582.2	13.16	14.1	3.58	56.3	810.5	16.98	9.8
11	2.51	25.6	609.8	16.02	13.5	2.88	47.7	600.5	14.09	13.0	3.07	58.4	682.1	14.94	11.3
12	3.17	16.7	688.5	15.91	12.2	3.58	29.2	749.8	16.91	11.0	4.11	64.3	1008.5	21.74	7.9
13	2.90	29.1	697.0	18.26	11.8	3.31	37.3	718.9	19.73	11.3	3.88	94.5	834.4	16.54	8.9
14	2.32	11.7	516.4	12.35	16.4	2.47	15.2	548.8	13.53	15.3	3.04	47.0	718.2	16.48	11.1
15	3.59	32.6	553.9	9.21	14.4	3.67	38.5	574.0	9.72	13.7	4.40	57.8	707.7	12.04	10.9
16	9.13	157.2	1077.7	11.22	6.6	9.38	180.6	1089.4	12.03	6.3	10.74	184.4	1307.7	14.69	5.4
17	2.83	41.6	546.7	12.84	14.3	2.98	49.8	606.6	14.72	12.8	3.24	47.0	619.6	15.68	12.6
18	2.65	16.3	565.0	12.65	14.8	2.78	21.5	597.8	13.29	13.9	3.11	17.6	730.4	18.18	11.6
19	2.72	35.1	514.9	11.96	15.3	2.84	41.0	528.6	12.62	14.7	2.05	38.8	557.7	14.69	14.2
20	3.40	27.2	663.1	13.89	12.4	3.58	34.5	693.4	15.61	11.7	3.94	29.0	880.9	20.71	9.5
21	3.30	97.2	613.0	12.49	11.4	3.75	119.1	691.6	12.08	10.0	4.11	136.3	732.9	11.62	9.2
22	3.47	44.0	654.7	13.19	12.1	3.71	66.7	657.5	13.26	11.5	4.17	103.1	870.2	16.59	8.5
23	5.33	85.0	817.3	16.65	9.2	5.71	106.6	887.6	19.08	8.3	5.92	119.7	985.9	20.52	7.4
24	2.24	11.9	540.9	15.08	15.7	2.42	21.0	590.5	16.46	14.1	3.12	53.3	617.4	13.00	12.5
25	2.43	11.4	504.8	13.26	16.7	2.46	17.7	509.8	12.95	16.3	2.93	65.8	682.1	14.52	11.2
26	6.06	44.7	768.0	13.34	10.4	5.59	55.8	804.6	14.89	9.8	6.26	97.7	944.6	15.85	7.9
27	2.82	25.7	624.2	17.38	13.2	2.83	30.4	669.6	18.84	12.2	3.39	76.4	722.1	15.71	10.4
28	2.96	20.7	591.8	13.76	14.0	3.06	27.2	590.6	14.29	13.8	3.50	47.8	809.8	17.91	9.9
29	4.79	72.2	780.2	16.28	9.8	5.04	84.9	821.1	18.91	9.1	5.39	92.1	917.6	19.91	8.2
30	2.44	19.7	591.1	15.96	14.1	2.70	33.1	593.3	14.84	13.6	3.25	85.8	615.6	10.64	11.7
31	2.43	18.8	516.1	13.07	16.0	2.79	34.7	544.0	12.59	14.6	3.11	78.5	692.7	13.76	10.7
32	5.33	57.8	763.8	13.50	10.2	6.02	73.0	810.9	14.20	9.4	6.53	123.9	964.1	15.14	7.5
SUM	2.63	25.0	550.8	12.85	14.8	2.76	31.4	564.5	12.86	14.3	2.94	46.6	711.1	15.53	11.2
HAG	2.86	33.6	607.6	10.80	13.3	3.03	41.1	633.1	11.32	12.5	3.50	79.4	774.9	12.41	9.7
33	0.94	33.1	65.1	0.27	73.9	0.98	29.3	91.5	0.12	63.1	0.86	27.9	83.0	0.16	68.5
34	12.26	402.9	769.1	1.44	6.2	12.38	380.4	970.4	1.91	5.5	10.85	335.0	957.8	1.54	5.8
35	4.80	132.3	666.4	0.90	10.0	4.99	133.8	643.6	0.77	10.2	4.59	106.0	713.2	1.28	9.9
36	2.65	54.1	511.2	0.73	14.7	3.26	72.2	473.3	0.82	14.9	2.97	56.5	522.7	1.98	14.3
37	1.89	1.3	375.9	5.93	23.1	1.89	2.7	367.4	5.19	23.5	2.02	3.1	482.0	9.24	18.0
38	1.85	0.6	445.0	10.81	19.6	1.85	2.2	443.2	10.36	19.6	1.83	2.3	597.0	17.07	14.6
39	1.83	1.8	522.6	15.40	16.7	1.78	2.3	510.2	14.85	17.1	1.56	4.2	761.3	20.09	11.5

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX G,CONT'D

LISTING OF LOADED VEHICLE TEST RESULTS ON

VEHICLE 133 1969 CHRY STAW 383

DETROIT

MODE NO.	---- IWT=4500, RLHP=14.0 ---- HC	CO	CO2	NOX	FUEL ECON	---- IWT=5000, RLHP=14.0 ---- HC	CO	CO2	NOX	FUEL ECON	---- IWT=5500, RLHP=30.5 ---- HC	CO	CO2	NOX	FUEL ECON
1	5.39	103.9	470.3	4.51	13.6	7.40	92.8	462.2	4.51	14.1	5.59	83.3	456.1	5.63	14.7
2	5.73	93.0	695.8	8.73	10.3	8.02	101.9	706.3	8.73	9.9	6.57	100.6	872.1	12.45	8.4
3	9.71	182.3	895.4	9.00	7.3	13.17	171.1	985.8	11.02	6.8	10.41	171.1	1120.6	13.50	6.2
4	4.44	86.9	547.8	6.84	12.7	4.34	86.8	554.3	5.34	12.6	5.09	75.5	630.2	8.82	11.6
5	3.41	70.1	507.2	7.57	14.1	4.69	66.0	516.9	8.24	14.0	4.17	73.7	626.5	10.54	11.7
6	3.10	51.9	465.2	6.45	15.9	4.10	61.8	471.3	6.74	15.3	4.13	111.4	612.9	7.17	11.1
7	4.19	78.3	562.7	9.04	12.7	5.49	65.9	591.7	10.48	12.5	5.55	100.7	677.9	11.88	10.4
8	3.76	93.7	504.9	6.25	13.4	4.72	112.1	515.3	6.46	12.6	5.27	168.9	740.0	8.87	8.7
9	3.98	66.9	534.6	9.90	13.6	5.27	77.6	542.2	8.91	13.0	5.49	125.0	710.2	11.29	9.6
10	4.39	75.9	557.5	8.06	12.8	5.53	98.0	546.3	7.03	12.4	5.91	156.3	824.3	10.83	8.2
11	4.76	116.1	595.3	7.50	11.2	6.69	127.9	619.2	7.42	10.5	6.49	180.7	763.5	9.14	8.3
12	5.60	126.2	666.0	7.76	10.1	7.01	143.5	683.5	8.39	9.5	7.49	235.1	989.2	10.47	6.4
13	5.66	134.9	661.0	8.14	10.0	7.33	141.8	682.9	8.79	9.6	7.51	217.6	825.2	9.23	7.5
14	3.99	91.1	495.6	6.30	13.6	5.06	102.5	509.8	6.69	12.9	5.44	149.9	571.9	8.47	10.8
15	6.28	76.7	540.4	6.15	13.0	8.26	96.8	562.9	7.03	12.0	7.33	110.2	753.7	10.06	9.3
16	13.61	191.9	1048.3	9.15	6.2	18.50	243.1	1116.1	11.37	5.7	15.85	220.9	1454.6	13.07	4.8
17	4.43	102.4	526.5	6.36	12.7	6.59	141.6	534.2	6.01	11.4	5.90	152.1	627.2	5.94	10.0
18	4.48	102.6	552.4	6.66	12.2	5.64	106.6	572.4	6.92	11.7	5.89	178.1	711.0	6.40	8.8
19	4.17	109.1	504.3	5.10	12.9	6.23	109.2	526.4	5.66	12.4	5.90	144.8	625.7	5.46	10.2
20	5.75	111.6	689.6	8.65	10.0	7.33	116.8	693.5	8.65	9.9	7.47	217.8	853.8	7.21	7.3
21	5.52	146.0	639.0	7.43	10.0	7.55	168.6	652.9	7.27	9.4	6.92	246.6	703.2	6.84	8.0
22	5.54	128.8	620.2	7.06	10.6	9.72	153.9	635.4	6.91	9.8	7.05	208.9	821.3	8.41	7.6
23	9.10	172.5	809.9	8.69	8.0	7.56	183.6	654.0	9.20	9.2	10.28	242.2	979.4	9.78	6.4
24	3.91	86.2	533.3	7.85	13.0	5.18	94.9	546.6	8.59	12.5	4.91	148.3	642.2	8.21	10.0
25	3.81	80.1	499.1	7.11	13.9	4.80	82.8	520.7	7.52	13.3	5.05	142.2	695.4	8.55	9.5
26	9.11	112.0	810.0	10.19	8.7	10.52	102.2	807.9	11.01	8.9	10.30	152.7	1071.5	14.64	6.6
27	4.99	117.3	587.6	7.72	11.3	6.33	132.8	610.5	7.61	10.6	6.06	178.9	715.2	8.30	8.7
28	5.21	114.4	558.0	6.43	11.8	6.29	105.3	602.9	7.57	11.3	6.44	166.8	776.4	9.37	8.4
29	8.26	153.1	734.2	8.50	8.9	10.17	152.8	781.6	8.61	8.4	9.29	188.4	951.7	10.33	6.9
30	2.32	91.7	562.5	7.38	12.4	5.45	94.1	616.5	8.84	11.4	5.44	145.7	670.3	8.17	9.7
31	3.86	92.2	513.3	6.55	13.2	4.90	104.1	509.4	6.98	12.9	4.11	161.7	669.3	8.01	9.5
32	8.14	117.0	793.6	8.69	8.8	10.83	127.4	621.8	11.11	10.4	7.05	176.0	957.2	12.60	7.1
SUM	4.01	84.1	555.3	7.70	12.7	5.19	89.3	580.1	8.61	12.0	5.23	130.9	712.1	9.97	9.5
BAG	4.82	103.8	587.3	7.02	11.6	4.84	112.8	614.2	7.42	11.0	6.09	170.6	782.8	8.37	8.3
33	0.57	17.0	75.7	0.00	85.1	0.61	17.0	80.0	0.17	81.7	0.72	17.0	89.1	0.28	75.2
34	9.72	251.2	1263.1	4.26	5.3	7.43	203.8	1062.4	0.69	6.3	10.80	259.4	1484.7	4.26	4.6
35	4.14	97.8	654.6	0.00	10.8	4.57	74.4	735.3	0.64	10.2	5.40	67.6	786.5	1.60	9.8
36	3.43	58.8	544.2	0.50	13.7	3.43	19.7	705.1	5.36	11.9	3.24	6.8	794.6	9.49	10.9
37	1.91	4.8	425.6	8.26	20.2	2.93	14.8	453.1	9.09	18.3	2.64	14.8	544.8	12.21	15.4
38	2.74	43.0	544.9	9.50	14.3	3.35	28.8	513.6	10.47	15.6	3.69	83.7	602.5	9.43	11.9
39	3.01	72.4	501.6	8.36	14.2	3.44	74.7	556.9	10.34	13.0	4.19	109.8	681.3	11.89	10.2

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX G, CONT'D

LISTING OF LOADED VEHICLE TEST RESULTS ON

VEHICLE 136 1969 FORC FAIR 302

DETROIT

MODE NO.	INT=3500, RLHP=11.2					INT=4000, RLHP=11.2					INT=4500, RLHP=25.9				
	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON
1	4.10	40.9	381.8	8.28	19.3	3.00	41.6	398.0	8.01	18.8	3.46	55.2	457.8	8.10	16.0
2	4.24	20.7	523.1	8.79	15.6	3.66	24.0	531.4	9.29	15.3	4.60	33.7	623.4	13.23	12.8
3	7.19	86.1	436.6	8.49	14.9	6.34	68.1	788.6	10.02	9.7	7.38	96.7	864.8	13.32	8.5
4	3.26	32.0	392.7	7.62	19.6	2.85	29.0	434.0	8.71	18.2	3.25	29.0	460.7	10.22	17.2
5	2.40	11.3	372.7	10.28	22.3	2.20	9.9	395.5	12.53	21.2	2.56	11.3	459.8	14.88	18.3
6	2.30	8.7	354.3	8.66	23.7	2.22	7.0	368.4	9.10	23.0	2.78	7.7	476.0	15.19	17.9
7	2.47	26.3	386.5	8.76	20.4	2.72	28.4	431.2	11.12	18.3	3.49	79.4	520.4	11.20	13.5
8	2.32	12.2	410.4	9.94	20.3	2.53	23.4	414.0	9.75	19.3	3.64	43.6	616.1	16.84	12.7
9	2.39	8.1	387.9	11.51	21.7	2.83	15.3	422.7	13.18	19.5	3.48	52.1	560.2	15.53	13.6
10	2.76	10.9	436.5	11.13	19.2	3.18	10.6	458.9	11.49	18.3	4.21	31.9	672.6	20.50	12.1
11	2.61	37.0	427.5	12.62	18.0	3.34	25.2	490.8	11.61	16.4	4.29	106.8	579.8	9.46	11.7
12	3.26	13.0	527.3	14.29	15.9	3.90	25.9	546.3	13.95	14.8	5.54	58.8	795.0	21.17	9.8
13	3.10	18.3	516.0	16.11	16.0	3.58	28.6	570.0	17.13	14.2	5.17	80.1	696.5	15.04	10.6
14	2.36	8.0	325.2	10.74	25.7	2.54	10.8	418.6	10.87	20.0	3.89	36.1	442.3	16.79	17.4
15	4.01	25.4	448.8	7.29	17.7	4.02	26.0	437.4	6.69	18.1	5.74	36.0	590.1	12.60	13.3
16	9.23	84.3	892.6	9.35	8.4	9.70	103.5	867.5	7.99	8.4	12.91	103.5	1098.2	16.47	6.8
17	3.05	24.2	421.2	12.22	18.9	3.42	39.9	491.2	14.30	15.7	4.26	46.7	549.7	15.83	13.9
18	2.85	16.6	408.6	9.17	20.0	2.97	16.2	455.4	10.64	18.1	3.97	16.2	550.8	16.23	15.1
19	2.98	25.5	416.7	12.21	19.0	3.17	25.5	479.2	13.30	16.8	4.38	53.6	536.7	11.37	14.0
20	3.54	18.9	495.7	11.42	16.5	3.86	20.0	519.4	12.47	15.8	5.30	33.7	666.5	16.92	12.1
21	3.13	53.2	487.5	11.96	15.3	3.58	55.0	566.7	12.15	13.4	4.94	142.1	618.2	10.48	10.4
22	3.26	21.8	489.9	10.42	16.6	3.35	36.0	506.6	10.74	15.5	5.11	63.4	710.1	17.43	10.7
23	5.30	47.9	644.6	13.89	12.0	6.10	63.4	871.0	16.70	9.0	7.41	72.8	847.4	22.93	9.0
24	2.33	9.4	404.0	13.82	20.8	2.61	10.9	449.6	14.85	18.7	3.33	50.1	534.4	14.07	14.2
25	2.23	7.9	384.5	10.46	22.0	2.42	7.0	389.7	10.52	21.7	3.50	30.2	581.4	16.81	13.9
26	5.58	34.3	606.5	7.15	13.1	6.02	34.3	604.6	10.98	13.1	7.67	46.2	831.7	18.57	9.6
27	2.91	18.4	459.2	15.65	17.8	3.23	33.5	521.8	15.24	15.2	4.07	67.9	649.9	14.82	11.5
28	2.97	14.6	465.0	10.77	17.8	3.37	18.6	454.9	10.22	17.9	4.27	30.3	650.4	17.72	12.5
29	4.82	40.1	586.5	14.21	13.3	5.82	67.2	645.2	16.24	11.5	6.73	52.4	609.9	21.61	12.4
30	2.40	10.5	425.6	14.38	19.7	2.80	15.0	469.2	12.55	17.7	3.61	69.6	535.0	11.97	13.5
31	2.31	8.3	412.5	10.47	20.5	2.65	12.0	413.5	11.03	20.1	3.73	36.6	576.8	16.20	13.7
32	5.44	31.8	644.7	10.11	12.5	6.41	35.9	632.2	11.48	12.5	7.93	57.5	814.7	17.18	9.5
SUM	2.60	14.9	421.1	10.14	19.6	2.79	17.4	443.6	10.37	18.5	3.64	36.2	573.3	14.68	13.8
BAG	2.81	18.3	464.2	10.32	17.7	3.25	23.4	490.6	10.74	16.5	4.37	50.5	641.1	12.62	12.1
33	0.59	9.2	64.8	0.16	109	0.65	7.1	65.9	0.17	112	0.95	10.3	63.3	0.16	107
34	6.16	96.5	765.2	1.22	9.5	6.78	74.1	778.0	1.11	9.7	9.35	87.8	765.6	1.11	9.5
35	3.87	71.4	470.0	0.56	14.9	3.92	54.1	495.5	0.74	15.0	5.08	60.4	486.0	0.58	14.9
36	2.40	26.2	420.2	0.88	18.9	2.44	25.9	413.9	0.53	19.2	2.60	5.4	468.7	0.76	18.3
37	1.72	2.5	303.4	2.76	28.4	1.70	3.2	302.5	2.67	28.4	2.33	2.6	353.4	6.78	24.3
38	1.87	2.8	347.1	8.00	24.8	1.86	2.8	336.5	7.59	25.6	2.57	6.0	478.4	14.38	17.9
39	1.94	3.6	397.2	10.78	21.7	1.96	3.6	393.6	10.83	21.9	2.18	3.6	592.1	18.53	14.7

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX G,CONT'D

LISTING OF LOADED VEHICLE TEST RESULTS ON

VEHICLE 138 1969 FORD MUST 351

DETROIT

MODE NO.	---- IWT=3500, RLHP=12.3 ----					---- IWT=4000, RLHP=12.3 ----					---- IWT=4500, RLHP=27.3 ----				
	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON
1	6.00	113.5	447.9	3.93	13.8	6.33	126.3	574.6	3.76	15.0	6.85	114.4	584.5	2.30	11.3
2	4.69	50.8	532.6	3.95	14.1	5.17	57.6	542.7	4.25	13.7	5.57	110.3	570.1	4.67	11.7
3	10.19	185.9	724.4	3.92	8.5	10.85	197.1	778.0	3.81	7.9	10.55	244.2	808.3	4.88	7.2
4	3.56	55.3	412.2	3.73	17.4	3.83	60.8	444.9	4.04	16.1	3.76	69.3	467.7	6.17	15.1
5	2.37	16.3	413.4	6.32	19.9	2.32	16.8	425.2	6.70	19.3	2.65	20.7	473.5	11.08	17.3
6	2.68	10.5	392.4	4.95	21.3	2.18	11.3	417.6	5.67	20.1	2.67	17.7	519.7	9.77	16.0
7	3.83	67.2	436.5	6.28	16.0	2.70	65.0	446.7	6.74	15.9	4.33	108.2	483.8	7.84	13.3
8	2.89	36.8	426.9	5.82	18.0	2.80	43.8	464.7	6.55	16.4	3.97	120.8	577.3	8.69	11.4
9	3.05	19.3	466.2	10.20	17.5	3.15	21.2	478.2	10.22	17.0	3.90	64.8	558.7	13.67	13.2
10	3.55	18.3	481.5	7.12	17.0	3.42	18.3	506.5	8.12	16.3	4.33	67.2	667.2	13.49	11.3
11	4.82	98.9	426.4	7.49	14.9	4.42	58.2	483.8	6.93	15.1	5.69	157.4	500.8	8.91	11.6
12	4.53	44.3	569.2	8.15	13.6	4.44	33.7	633.3	11.14	12.7	5.78	99.4	790.6	14.93	9.2
13	5.11	42.1	527.4	13.32	14.6	4.96	50.1	561.8	13.48	13.5	6.58	154.9	643.2	10.72	9.8
14	3.21	16.6	448.5	7.35	18.3	3.23	22.8	468.8	8.32	17.2	4.50	79.1	578.3	10.67	12.4
15	6.50	30.7	507.8	5.25	15.4	7.00	34.9	520.7	5.38	14.8	11.22	67.8	616.6	7.70	11.7
16	16.37	165.6	967.6	7.55	6.9	16.55	160.6	981.4	7.15	6.9	17.76	236.2	1052.9	9.33	6.0
17	4.82	70.7	396.0	7.60	17.0	5.88	70.3	442.3	9.68	15.5	5.70	118.3	431.4	7.97	14.0
18	3.49	23.6	503.2	7.18	16.1	3.64	22.3	515.4	7.40	15.8	4.41	58.3	594.7	10.66	12.7
19	4.61	55.9	392.7	7.46	17.9	4.91	53.7	430.8	9.34	16.7	5.22	80.3	434.5	8.76	15.4
20	4.71	28.8	588.8	8.08	13.7	4.88	26.1	609.2	8.73	13.3	5.66	60.7	737.8	13.00	10.4
21	5.15	111.1	477.5	8.64	13.3	6.03	181.5	460.0	5.30	11.6	7.76	139.5	735.6	8.20	9.1
22	4.36	42.2	550.7	7.75	14.1	5.11	81.0	540.6	7.05	13.0	7.12	136.8	720.3	10.83	9.3
23	5.82	112.7	651.2	9.74	10.4	9.74	129.0	661.2	9.05	9.9	11.74	165.0	796.6	13.70	8.1
24	3.05	21.5	443.0	9.88	18.2	3.12	20.4	465.5	10.77	17.5	4.41	50.2	546.8	13.83	13.9
25	2.76	17.1	440.5	7.08	18.6	2.80	16.5	460.7	8.10	17.9	4.01	54.1	599.7	11.64	12.7
26	8.58	49.6	709.3	7.29	10.9	8.68	36.1	739.2	7.98	10.8	9.93	71.3	885.5	11.64	8.6
27	4.05	40.9	492.8	11.44	15.6	4.09	36.6	520.9	12.16	15.0	5.67	120.3	572.6	12.11	11.4
28	4.09	27.0	519.2	10.44	15.4	4.09	23.9	524.9	9.09	15.4	5.62	78.9	682.9	12.09	10.8
29	7.53	102.9	592.8	8.75	11.4	7.94	95.8	626.1	8.97	11.1	8.82	122.2	711.1	12.09	9.5
30	2.99	20.6	450.3	10.82	18.0	3.10	20.9	482.3	12.82	16.9	4.39	69.5	525.4	0.58	13.7
31	2.95	18.8	464.0	7.63	17.6	2.85	17.6	477.2	9.12	17.3	4.20	90.8	579.8	9.22	12.1
32	8.24	49.2	735.8	8.28	10.6	8.48	44.4	743.0	9.51	10.6	10.00	107.8	863.4	10.25	8.3
SUM	3.53	34.6	475.9	7.27	16.4	3.34	36.1	490.6	7.70	15.9	4.36	70.4	582.5	9.76	12.6
HAG	3.88	40.5	499.7	7.76	15.4	4.15	48.6	519.3	8.59	14.6	5.32	100.9	610.2	9.32	11.3
33	1.16	25.4	58.8	0.08	86.7	1.22	27.9	72.3	0.21	74.0	1.48	33.2	76.9	0.23	66.3
34	13.83	321.7	718.4	0.74	7.0	13.48	342.1	829.9	1.80	6.3	13.99	362.1	779.1	1.06	6.4
35	5.60	141.6	474.8	0.32	12.4	6.26	156.5	424.4	0.29	12.9	5.94	150.1	483.5	0.48	12.0
36	3.43	79.7	404.3	0.41	16.4	3.53	82.3	363.2	0.34	17.6	3.39	83.3	358.4	0.34	17.7
37	1.33	2.7	400.3	1.27	21.7	1.14	3.5	400.1	1.82	21.7	1.17	2.9	431.0	2.08	20.2
38	1.33	4.6	425.2	5.83	20.3	1.36	4.1	433.7	5.82	20.0	1.94	4.6	527.6	10.84	16.4
39	1.80	10.8	475.4	8.31	17.8	1.65	7.0	476.1	8.84	18.0	2.72	28.2	582.5	12.60	14.0

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX G,CONT'D

LISTING OF LOADED VEHICLE TEST RESULTS ON

VEHICLE 142 1969 PLYM FURY 318

DETROIT

MODE NO.	---- INT=4000, RLHP=12.0 ----					---- INT=4500, RLHP=12.0 ----					---- INT=5000, RLHP=27.4 ----				
	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON
1	8.32	71.4	341.5	3.86	18.5	11.19	104.8	286.3	3.13	18.2	10.62	111.0	358.7	3.53	15.7
2	7.21	50.1	541.6	4.49	13.8	8.68	79.9	614.4	5.46	11.6	8.33	83.1	617.9	6.67	11.5
3	11.12	106.0	635.4	4.02	10.6	20.64	162.6	746.4	5.14	8.3	16.67	171.7	734.0	6.03	8.4
4	5.07	63.7	416.2	4.95	16.7	6.13	71.6	487.6	5.61	14.3	4.98	90.6	495.5	6.04	13.6
5	2.63	20.7	413.9	6.17	19.5	3.25	24.7	485.1	7.51	16.6	3.73	46.8	480.1	7.30	15.7
6	2.85	14.8	413.1	5.79	19.9	2.93	17.3	435.4	6.27	18.8	3.58	44.2	508.6	7.52	15.1
7	3.54	41.3	457.5	5.89	16.6	4.09	38.2	513.5	7.28	15.1	4.79	70.3	546.0	7.55	13.2
8	3.62	36.8	482.6	7.66	16.1	3.51	50.4	499.4	7.93	15.1	4.42	88.9	641.8	9.80	11.2
9	4.08	26.4	452.8	8.35	17.5	4.30	36.0	493.4	9.04	15.7	4.76	50.7	583.5	9.93	13.1
10	4.04	19.3	511.9	9.25	16.0	4.28	30.5	525.6	9.25	15.1	5.19	69.9	682.7	10.53	11.0
11	5.27	60.8	485.7	6.28	14.8	5.62	82.1	543.3	7.21	12.9	6.72	126.8	585.8	5.70	11.0
12	5.65	46.4	605.4	10.16	12.7	5.34	55.5	638.0	10.43	12.0	6.86	132.6	800.6	10.55	8.6
13	7.04	93.7	556.7	7.40	12.2	6.96	81.8	612.4	8.68	11.6	7.78	131.0	672.9	7.27	9.8
14	3.94	35.3	445.7	7.83	17.3	3.93	43.1	462.0	7.42	16.4	5.08	97.3	576.3	8.56	11.9
15	10.47	42.0	414.6	4.41	17.3	10.46	63.5	422.1	4.06	16.0	11.31	93.3	509.2	5.24	12.8
16	23.91	128.4	744.9	5.45	8.7	24.75	196.1	784.8	5.06	7.6	27.28	232.0	887.5	6.49	6.6
17	6.05	57.9	437.0	5.55	16.2	6.61	74.7	462.8	5.72	14.8	7.23	104.2	499.9	5.37	12.9
18	4.55	50.1	443.1	5.16	16.6	4.79	54.1	497.9	6.71	14.8	5.58	70.4	581.5	8.81	12.5
19	6.06	52.7	431.7	5.46	16.6	6.31	67.1	450.2	5.95	15.4	6.53	86.3	500.0	5.03	13.5
20	5.66	32.7	554.1	7.32	14.2	6.59	59.0	592.4	7.98	12.6	7.04	95.0	683.8	9.33	10.4
21	6.19	79.7	505.8	6.03	13.6	6.83	117.4	530.7	5.66	12.0	7.30	143.3	559.6	5.76	11.0
22	5.65	65.1	531.4	7.31	13.6	5.92	80.5	555.2	8.62	12.7	7.28	139.6	726.0	9.55	9.2
23	14.29	94.3	612.4	8.11	11.0	14.81	123.1	666.6	9.37	9.8	15.29	145.8	774.5	10.06	8.4
24	3.75	26.1	468.8	8.13	17.0	3.89	36.6	495.0	8.33	15.7	4.48	68.1	540.1	6.76	13.4
25	3.18	15.7	474.1	8.71	17.4	3.35	31.7	487.6	8.94	16.2	4.49	80.8	590.0	9.09	12.1
26	12.61	44.6	618.9	7.08	12.2	13.71	85.0	640.9	7.14	10.9	13.93	119.2	764.4	8.22	8.9
27	5.28	49.8	526.7	9.13	14.3	5.86	65.7	555.6	8.59	13.1	6.63	119.7	595.7	6.12	11.0
28	4.94	23.4	483.0	7.67	16.6	5.31	47.6	523.8	8.29	14.4	6.52	92.5	657.8	10.26	10.8
29	12.82	67.3	597.9	8.95	11.9	13.29	98.8	578.1	10.09	11.4	14.30	113.1	759.0	10.84	9.0
30	3.77	28.6	510.5	8.41	15.6	3.94	39.3	481.3	8.39	16.0	4.90	89.0	590.1	6.03	11.9
31	3.52	35.2	465.6	7.26	16.7	3.67	54.7	509.0	7.15	14.6	4.99	102.8	525.9	8.78	12.6
32	11.41	61.8	610.6	6.66	11.9	12.01	103.4	635.6	5.92	10.6	13.16	130.1	767.7	8.94	8.8
SUM	4.28	37.7	469.0	7.86	16.4	4.48	47.8	492.4	8.06	15.3	5.10	70.4	581.4	9.12	12.5
BAG	5.42	58.8	505.3	7.27	14.4	5.70	58.0	537.4	7.66	13.7	6.78	107.5	632.9	7.68	10.8
33	2.04	20.6	44.0	0.06	107	1.47	19.2	43.5	0.13	113	1.80	20.8	41.0	0.12	111
34	10.56	271.5	668.7	0.00	7.9	5.68	270.0	798.3	1.38	7.2	10.22	283.1	748.6	1.48	7.2
35	4.65	123.1	490.5	0.08	12.7	3.69	107.4	499.8	0.40	13.0	3.89	104.0	509.3	0.34	13.0
36	2.23	70.4	365.4	0.16	18.4	2.84	67.5	382.4	0.41	17.8	3.05	66.0	375.9	0.39	18.1
37	2.15	24.6	337.9	2.02	23.2	2.11	26.7	344.9	2.25	22.6	2.26	24.9	383.9	3.88	20.6
38	1.94	9.9	385.5	7.25	21.8	2.03	10.9	406.9	8.13	20.6	2.23	12.3	505.2	11.90	16.7
39	2.06	13.1	471.5	13.19	17.8	2.33	20.9	486.2	12.50	16.9	2.58	18.1	625.5	15.14	13.4

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX G.CONT'D

LISTING OF LOADED VEHICLE TEST RESULTS ON

VEHICLE 147 1968 BUIC ELEC 430

DETROIT

MODE NO.	---- IWT=4500, RLHP=14.0 ----					---- IWT=5000, RLHP=14.0 ----					---- IWT=5500, RLHP=30.5 ----				
	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON
1	6.12	69.6	399.8	4.35	16.8	6.78	82.8	465.6	2.68	14.4	5.18	103.8	377.4	2.96	15.9
2	7.14	138.6	465.9	3.02	12.6	6.49	121.0	610.6	4.71	10.8	7.09	180.7	670.7	3.63	9.1
3	12.03	203.7	804.3	3.56	7.6	11.94	176.2	862.1	3.90	7.5	11.47	250.3	880.4	4.45	6.8
4	5.94	118.9	440.0	4.28	13.7	5.05	83.1	492.4	3.36	13.9	5.38	119.0	518.4	5.81	12.3
5	3.77	67.5	424.5	7.01	16.4	3.39	53.6	458.0	5.24	16.1	6.56	78.8	521.3	7.94	13.3
6	3.58	55.5	445.8	4.66	16.3	3.15	32.8	434.6	6.36	17.9	6.33	67.6	548.1	7.71	13.2
7	5.04	122.6	417.7	3.85	14.2	3.32	186.8	545.9	4.00	10.4	5.15	178.2	533.6	5.52	10.7
8	4.12	118.6	501.6	5.22	12.7	4.50	104.8	440.9	5.19	14.1	4.85	177.0	682.3	8.79	9.1
9	4.67	86.5	464.7	7.55	14.4	5.40	133.7	519.3	5.73	11.9	5.35	160.8	588.6	7.36	10.3
10	4.84	58.6	556.0	7.78	13.4	5.33	65.2	485.9	7.11	14.7	5.86	154.8	738.0	10.55	8.9
11	5.25	144.3	560.6	5.24	11.0	6.24	233.6	579.1	3.69	9.2	6.39	259.6	628.3	3.43	8.4
12	5.81	114.2	699.0	8.58	9.9	6.47	107.9	610.4	9.08	11.1	7.55	357.9	838.6	10.36	6.2
13	5.06	130.6	599.0	8.43	10.8	7.01	219.6	676.6	5.41	8.5	7.08	350.1	693.7	5.92	7.0
14	4.09	70.7	519.4	6.73	13.8	4.56	86.2	462.4	6.19	14.5	5.27	133.5	636.3	8.38	10.3
15	8.08	97.9	479.0	3.39	13.5	9.70	88.9	439.6	3.31	14.5	8.31	128.2	577.1	4.39	11.0
16	17.04	207.9	955.5	4.40	6.6	17.04	183.2	889.5	3.88	7.2	17.70	251.8	1080.1	5.69	5.8
17	4.91	76.3	254.6	9.20	22.7	5.14	99.1	496.8	7.21	13.3	5.68	215.6	545.3	3.85	9.8
18	4.45	55.7	537.3	6.66	13.9	4.54	56.3	573.7	7.14	13.1	0.33	131.0	618.3	7.65	10.8
19	5.04	71.9	446.6	8.17	15.4	4.98	67.4	492.7	9.95	14.4	5.63	126.0	511.5	6.26	12.2
20	5.78	71.7	634.1	6.85	11.6	5.75	50.4	695.4	9.46	11.2	6.58	129.2	754.1	10.36	9.1
21	5.70	202.4	532.3	3.35	10.2	5.61	187.2	563.4	5.09	10.1	4.43	244.8	639.5	5.46	8.5
22	6.01	117.2	586.8	6.07	11.2	6.43	152.8	635.7	6.51	9.9	6.94	206.8	784.5	9.82	7.8
23	9.81	135.5	743.6	8.66	9.0	10.25	122.9	815.6	9.45	8.5	10.06	176.7	953.0	13.04	7.0
24	3.87	81.3	513.1	7.83	13.6	3.94	69.7	535.4	7.92	13.5	4.68	195.4	572.9	6.94	9.9
25	3.75	56.8	490.2	8.06	15.0	3.96	66.6	502.6	6.99	14.3	4.65	142.9	611.2	8.96	10.4
26	11.61	153.6	649.8	5.80	9.6	11.77	93.6	670.0	5.36	10.4	11.34	208.2	816.9	7.18	7.5
27	5.04	129.4	555.3	8.73	11.5	5.29	108.7	570.5	7.88	11.7	6.50	292.3	586.8	3.58	8.3
28	5.73	71.6	559.0	8.27	12.9	5.83	43.8	571.7	8.18	13.5	6.59	161.6	717.5	9.75	8.9
29	9.08	104.0	683.6	8.47	10.1	9.03	27.1	743.9	9.89	10.9	8.98	137.8	882.1	11.99	7.9
30	4.57	142.8	555.8	4.95	11.2	4.70	114.7	492.5	4.30	12.9	3.71	202.8	553.3	4.57	10.0
31	4.14	107.4	510.1	6.05	12.8	4.27	91.5	509.3	5.88	13.3	4.97	171.1	628.7	8.60	9.7
32	12.04	188.9	676.7	5.04	8.8	11.21	95.5	664.0	4.55	10.4	11.27	229.3	807.8	7.00	7.4
SUM	4.28	77.0	514.3	7.12	13.7	4.47	81.6	516.9	6.88	13.5	4.98	139.8	678.5	10.50	9.7
BAG	5.11	119.8	550.1	6.49	11.8	5.31	136.3	567.8	6.94	11.1	5.80	198.0	648.4	7.47	9.1
33	0.66	11.0	78.7	0.04	90.5	0.99	14.3	54.4	0.16	110	0.71	11.8	72.9	0.05	94.6
34	9.39	159.7	881.2	0.00	7.6	9.90	85.5	899.5	0.58	8.3	9.05	174.7	1013.7	1.48	6.7
35	14.03	317.5	509.8	0.00	8.4	8.20	183.1	586.2	0.32	9.9	13.01	303.8	516.4	0.26	8.6
36	5.45	108.4	480.6	0.53	13.3	5.88	140.9	401.6	0.21	13.8	7.71	177.3	395.6	0.26	12.7
37	3.22	61.2	345.2	0.87	14.7	3.03	54.0	339.0	0.83	20.5	3.52	37.3	499.0	4.38	15.6
38	2.33	21.7	412.9	5.60	19.5	2.45	19.1	435.6	6.36	18.7	2.55	21.0	693.6	15.22	12.1
39	2.03	14.2	528.7	12.59	15.9	2.03	16.6	505.1	12.09	16.5	3.06	58.0	828.4	22.43	9.6

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX G,CONT'D

LISTING OF LOADED VEHICLE TEST RESULTS ON

VEHICLE 150 1968 CHEV IMPA 307

DETROIT

MODE NO.	---- INT=4000, RLHP=12.0 ----					---- INT=4500, RLHP=12.0 ----					---- INT=5000, RLHP=27.4 ----				
	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON
1	5.35	98.4	410.8	3.49	15.2	7.77	209.8	517.2	2.60	10.2	7.77	148.0	415.4	1.77	13.2
2	6.05	105.7	572.4	4.68	11.7	6.57	95.6	584.2	4.56	11.8	6.57	123.8	619.2	5.10	10.6
3	11.80	171.8	766.4	6.20	8.3	12.41	173.9	841.2	5.86	7.7	11.49	199.8	853.6	5.53	7.4
4	4.22	47.0	451.2	6.47	16.5	4.62	96.0	579.7	4.60	11.9	4.50	86.7	545.4	4.34	12.8
5	2.68	21.2	462.3	7.52	17.6	3.20	77.4	501.3	5.37	14.0	4.02	83.3	522.7	6.17	13.3
6	2.36	20.0	427.1	5.50	19.0	3.10	41.3	409.2	4.00	18.3	3.69	90.7	528.1	6.55	13.0
7	5.29	104.7	506.4	6.60	12.9	15.17	286.0	554.0	5.44	8.4	9.85	190.0	552.7	5.86	10.1
8	8.15	155.2	524.2	6.11	11.2	10.61	167.4	528.8	5.00	10.8	22.75	402.9	781.7	6.20	6.0
9	5.42	90.4	489.4	5.93	13.7	7.20	157.1	493.8	5.32	11.6	20.91	251.7	656.8	6.90	7.9
10	5.58	77.9	519.8	6.17	13.4	6.38	91.0	522.0	5.33	13.0	30.30	392.1	904.9	6.32	5.5
11	6.42	194.7	527.8	3.74	10.4	11.03	275.4	597.4	5.67	8.3	15.17	317.7	637.0	4.50	7.5
12	6.69	119.4	631.0	6.87	10.6	13.92	186.3	708.9	7.10	8.5	14.91	458.1	875.5	6.25	5.4
13	7.52	217.4	605.7	5.56	9.1	14.13	289.6	675.2	5.93	7.6	12.78	342.1	730.6	6.15	6.8
14	7.83	129.2	484.6	4.89	12.5	10.16	131.3	501.3	5.13	12.0	9.03	323.9	636.5	4.72	7.6
15	9.73	64.7	485.1	4.32	14.4	12.46	94.7	501.6	3.72	12.9	11.38	185.5	623.3	4.80	9.3
16	20.68	180.0	1016.4	6.30	6.5	24.85	183.0	1005.6	5.40	6.5	24.50	346.2	1236.9	6.69	4.8
17	5.71	112.5	509.2	4.63	12.6	7.11	201.0	505.7	2.96	10.5	11.10	250.2	563.2	3.37	9.0
18	4.22	60.8	502.4	2.94	14.5	5.10	88.1	490.9	3.87	13.7	6.72	193.4	667.2	6.30	8.9
19	5.07	112.2	492.0	3.54	13.0	6.61	187.0	492.8	3.24	11.0	8.99	160.5	520.0	3.73	11.1
20	5.90	111.0	573.0	4.17	11.6	6.58	115.3	601.8	4.42	11.0	7.95	184.2	759.0	7.66	8.3
21	7.80	233.6	542.5	4.56	9.5	10.85	304.6	551.9	4.27	8.3	9.46	266.5	571.7	4.51	8.7
22	12.18	195.8	614.2	5.77	9.2	14.39	201.4	630.8	5.50	8.9	10.43	379.1	745.5	5.88	6.5
23	13.48	198.0	727.1	7.25	8.2	15.21	210.4	718.1	7.19	8.1	13.48	289.3	858.8	7.30	6.5
24	4.81	91.5	477.4	5.55	13.9	5.09	161.2	476.4	5.17	11.9	9.50	214.2	573.5	5.04	9.4
25	4.54	87.0	459.0	5.36	14.5	4.98	82.2	469.6	4.92	14.4	5.28	273.0	645.4	4.87	8.1
26	11.18	99.8	702.9	6.77	9.9	11.75	102.4	700.7	5.82	9.9	14.21	254.4	903.1	8.08	6.6
27	6.96	187.0	556.6	5.46	10.2	12.10	305.8	571.5	5.14	8.1	14.24	306.6	662.9	6.20	7.5
28	6.48	90.0	547.0	6.06	12.5	11.17	126.8	565.2	5.97	11.1	10.51	296.6	726.7	6.03	7.2
29	9.70	124.1	660.9	8.53	10.0	13.13	196.0	669.1	6.38	8.7	12.34	206.2	811.1	8.08	7.6
30	4.56	122.2	489.7	4.56	12.7	7.86	256.2	521.0	4.25	9.4	12.27	231.7	576.1	5.35	9.1
31	4.58	108.8	479.8	4.98	13.3	10.10	146.3	553.4	5.54	10.9	9.26	318.9	641.4	5.52	7.6
32	10.13	122.1	714.4	6.11	9.5	16.75	165.7	756.3	6.23	8.3	15.05	283.4	876.7	8.12	6.5
SUM	5.15	85.3	504.5	5.68	13.6	6.86	119.6	523.9	5.47	12.1	8.75	193.6	663.7	6.66	8.9
BAG	7.29	141.5	544.9	5.66	11.2	10.07	193.3	583.7	5.49	9.7	12.43	294.9	696.6	5.78	7.4
33	2.01	18.8	49.5	0.05	103	1.29	22.9	66.2	0.04	83.5	1.27	22.2	63.2	0.04	87.0
34	17.82	222.5	703.6	0.94	8.0	13.49	226.6	654.4	0.47	8.4	12.93	211.8	660.7	0.42	8.6
35	6.16	85.4	516.2	0.42	13.2	5.28	86.1	490.6	0.52	13.8	5.20	71.4	569.9	0.63	12.7
36	2.92	22.9	524.4	1.14	15.6	3.20	32.3	481.7	1.19	16.4	3.00	18.6	571.6	1.82	14.5
37	1.77	5.7	367.2	2.86	23.2	1.84	7.7	381.4	5.01	22.2	2.06	7.5	462.0	5.69	18.5
38	1.76	9.4	421.8	5.27	20.1	1.84	11.9	430.9	5.34	19.5	2.26	19.3	579.1	10.55	14.4
39	2.96	24.5	482.8	8.51	16.7	2.73	22.3	486.3	8.24	16.7	3.95	120.2	732.1	9.18	9.5

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX G.CONT'D

LISTING OF LOADED VEHICLE TEST RESULTS ON

VEHICLE 151 1968 CHEV IMPA 327

DETROIT

MODE NO.	---- IWT=4000, RLHP=12.0 ----					---- IWT=4500, RLHP=12.0 ----					---- IWT=5000, RLHP=27.4 ----				
	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON
1	40.25	152.6	341.1	1.12	12.5	50.72	117.3	366.7	1.46	12.5	49.78	246.0	358.7	1.00	9.8
2	59.03	138.9	434.2	1.21	10.6	59.69	150.7	509.3	1.81	9.5	74.10	213.8	510.8	1.36	8.2
3	92.24	191.3	710.5	1.90	6.8	101.90	193.6	762.0	2.43	6.4	135.03	231.8	763.9	2.72	5.7
4	44.25	96.6	403.8	2.54	12.8	54.40	119.4	427.5	2.37	11.3	77.81	157.5	446.5	2.67	9.4
5	39.86	142.0	383.9	2.34	12.1	46.92	148.4	397.7	2.22	11.4	58.70	207.7	427.9	2.02	9.4
6	45.34	118.1	350.4	1.44	13.2	46.30	133.0	365.6	1.38	12.3	71.42	178.1	413.5	1.49	9.6
7	60.14	361.5	394.9	1.94	7.7	61.04	293.6	419.7	1.88	8.3	59.31	278.0	378.9	1.89	8.8
8	53.51	199.5	390.4	1.73	10.2	54.31	197.2	419.6	2.13	9.8	52.78	430.1	406.1	0.77	7.1
9	52.43	176.2	412.4	2.83	10.4	53.22	180.2	428.2	2.86	10.1	51.72	397.4	449.3	1.72	7.2
10	68.18	135.3	460.8	2.48	10.0	69.20	149.2	452.7	2.40	9.8	67.24	351.0	539.5	2.13	6.8
11	63.44	271.8	431.8	1.86	8.4	64.39	317.4	442.7	1.95	7.7	62.57	498.2	473.6	1.58	6.1
12	81.44	187.1	503.6	2.36	8.4	82.67	215.3	515.4	2.39	8.0	80.33	448.7	646.5	1.81	5.5
13	73.91	318.2	462.3	2.17	7.4	75.02	314.2	515.8	2.26	7.1	72.89	505.8	884.5	1.47	4.6
14	58.78	167.0	366.2	1.57	10.9	59.66	185.4	390.3	1.38	10.2	57.98	335.3	847.1	5.64	5.7
15	83.89	168.8	409.8	1.13	9.4	85.45	156.9	428.4	1.26	9.4	117.31	278.4	797.8	3.14	5.5
16	187.82	320.0	846.2	1.69	4.6	200.82	297.3	871.5	1.80	4.5	299.60	522.8	1429.9	4.45	2.8
17	59.25	149.5	386.9	2.00	11.0	62.37	165.8	412.7	2.02	10.2	94.39	334.6	524.2	1.53	6.6
18	61.04	176.2	403.9	1.19	10.2	63.46	193.2	406.5	1.08	9.7	86.75	281.7	524.9	1.96	7.1
19	61.82	191.7	370.3	1.39	10.2	65.50	201.3	406.6	1.51	9.5	88.90	267.9	502.1	1.76	7.4
20	77.04	207.7	475.0	1.27	8.5	85.36	227.1	495.5	1.28	7.9	109.96	265.0	644.4	2.47	6.3
21	72.08	341.1	420.1	1.32	7.5	73.16	393.0	423.8	1.52	7.0	71.09	408.7	550.6	6.91	6.3
22	81.34	244.9	468.4	1.55	8.0	82.56	246.4	503.2	1.59	7.7	80.23	304.8	1120.8	7.80	4.8
23	103.61	212.0	606.0	3.03	7.0	113.32	219.7	627.5	3.71	6.7	139.38	366.0	1071.1	5.41	4.3
24	61.04	189.1	378.4	1.99	10.2	61.96	221.9	393.6	1.96	9.5	60.20	310.2	467.8	1.86	7.7
25	58.31	139.2	406.9	1.71	10.9	59.19	169.4	390.0	1.47	10.5	57.51	391.1	464.3	1.05	7.0
26	114.65	204.7	619.1	1.90	6.8	121.16	218.8	631.7	1.74	6.5	169.98	408.1	741.6	1.84	4.6
27	72.53	302.3	404.1	1.54	8.0	73.62	278.4	457.3	1.80	7.9	71.53	426.4	548.6	1.86	6.1
28	81.33	183.9	432.5	1.55	9.1	82.55	188.5	449.7	1.79	8.9	80.21	320.4	577.2	2.09	6.6
29	94.96	179.5	584.9	2.85	7.6	102.43	194.8	592.9	3.10	7.3	145.67	289.5	738.0	4.00	5.4
30	61.83	240.5	376.4	1.66	9.3	62.76	246.1	379.5	1.59	9.2	60.98	352.7	463.1	1.78	7.3
31	59.09	170.1	387.9	1.47	10.5	59.98	218.4	378.2	1.13	9.7	58.28	367.6	480.9	1.09	7.1
32	118.00	247.0	596.6	1.60	6.5	128.30	276.7	594.6	1.45	6.2	165.73	442.6	726.8	1.61	4.6
SUM	58.08	160.9	419.7	2.13	10.4	59.68	167.4	434.2	2.20	10.0	63.85	253.2	576.0	3.48	7.5
BAG	65.99	199.2	437.3	1.78	9.2	66.81	203.0	529.2	1.70	8.4	81.20	369.1	599.1	2.04	6.2
33	5.04	1.1	51.5	0.07	128	7.21	10.3	61.2	0.10	88.6	5.65	4.4	49.0	0.05	120
34	113.13	188.8	902.7	1.87	5.7	74.64	61.3	726.3	0.84	8.4	66.16	252.2	1004.2	1.09	5.5
35	33.94	128.9	546.5	0.47	10.4	44.39	135.8	514.3	0.50	10.2	36.75	182.0	550.1	0.52	9.3
36	47.70	112.0	364.3	0.43	12.8	48.44	125.1	362.0	0.42	12.5	49.00	166.1	420.8	0.49	10.6
37	41.48	107.4	328.3	0.73	14.1	39.77	99.0	316.4	0.65	14.8	43.35	111.8	376.1	1.14	12.9
38	40.85	82.5	391.4	1.72	13.6	45.36	81.5	421.6	2.41	12.8	51.96	91.5	519.9	4.05	10.7
39	43.84	66.7	427.6	3.97	13.2	42.88	64.9	431.3	3.98	13.3	45.52	97.1	635.6	7.29	9.5

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX G,CONT'D

LISTING OF LOADED VEHICLE TEST RESULTS ON

VEHICLE 154 1968 DODG POLA 383

DETROIT

MODE NO.	---- IWT=4000, RLHP=13.2 ----					---- IWT=4500, RLHP=13.2 ----					---- IWT=5000, RLHP=29.0 ----				
	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON
1	5.52	119.8	372.1	3.72	15.4	5.25	123.0	367.5	4.33	15.4	5.58	129.4	397.6	4.76	14.3
2	5.82	88.2	631.1	7.75	11.3	5.94	99.8	618.7	8.43	11.2	5.94	102.4	726.9	10.90	9.8
3	10.16	207.9	858.3	15.53	7.3	10.19	221.7	812.2	7.50	7.4	10.66	236.0	998.9	11.52	6.3
4	4.35	82.4	494.9	15.00	13.9	4.37	90.0	449.7	7.21	14.7	4.55	95.0	611.4	11.56	11.4
5	3.08	36.2	473.4	9.13	16.4	3.06	42.7	446.4	10.53	17.0	3.25	46.8	578.9	14.28	13.4
6	3.37	34.7	441.0	12.84	17.5	3.17	38.9	490.7	10.56	15.8	3.55	43.4	602.4	13.28	13.0
7	3.62	34.9	514.7	13.33	15.3	3.74	60.9	460.9	9.38	15.6	4.02	102.0	654.9	12.23	11.0
8	3.29	32.7	509.0	11.37	15.5	3.51	49.9	454.7	10.69	16.3	4.28	81.8	687.6	15.26	10.7
9	3.65	35.0	509.8	9.69	15.4	3.88	44.5	475.1	11.28	15.9	4.34	77.5	665.0	15.00	11.1
10	4.36	43.3	550.6	12.09	14.0	4.41	47.2	570.6	12.81	13.5	5.18	73.7	761.8	17.62	9.9
11	3.96	48.3	533.3	12.68	14.3	3.91	50.8	532.6	12.27	14.2	3.95	113.7	683.3	12.15	10.1
12	5.03	47.9	682.5	16.28	11.5	5.02	52.5	727.5	16.79	10.7	5.98	82.4	921.1	20.76	8.3
13	4.73	55.1	626.9	14.74	12.2	4.71	59.2	679.3	16.97	11.3	5.68	125.3	782.2	13.96	8.9
14	3.69	36.0	513.6	11.51	15.3	3.75	41.0	522.0	11.80	14.8	4.30	64.2	683.9	15.19	11.1
15	4.90	64.4	551.0	8.70	13.3	7.14	75.5	541.8	8.74	13.0	7.21	87.2	675.3	11.18	10.6
16	15.78	213.7	1018.7	11.50	6.3	15.93	246.6	1014.9	11.38	6.1	17.48	277.9	1234.8	15.05	5.1
17	4.63	69.9	493.3	10.68	14.4	4.58	77.7	547.8	11.75	13.0	5.06	91.3	639.3	11.48	11.1
18	4.31	49.0	556.6	10.79	13.7	4.23	54.0	566.2	11.69	13.4	4.81	79.7	652.2	11.93	11.2
19	4.67	67.9	493.8	10.59	14.4	4.57	76.0	516.0	10.73	13.7	4.85	88.3	595.5	9.73	11.8
20	5.74	63.0	671.0	12.77	11.3	5.75	72.5	669.8	13.38	11.1	6.38	101.6	791.0	14.61	9.1
21	4.84	98.4	535.3	9.48	12.6	5.48	136.5	606.9	9.71	10.6	5.95	191.4	649.4	6.78	9.2
22	5.41	73.0	648.7	11.54	11.4	5.49	88.8	643.8	12.01	11.1	6.23	142.5	800.6	15.51	8.5
23	9.19	132.3	785.0	13.41	8.7	8.96	149.3	819.0	14.64	8.2	9.64	190.2	939.3	15.65	7.0
24	3.52	36.9	514.6	12.22	15.2	3.43	42.9	532.7	13.58	14.5	3.59	61.1	594.4	12.47	12.6
25	3.55	35.2	476.8	10.45	16.3	3.46	38.8	505.9	11.65	15.4	3.90	62.1	672.1	16.11	11.3
26	9.73	90.6	928.1	10.76	8.1	9.64	110.3	742.9	11.37	9.4	9.75	130.8	922.3	15.72	7.7
27	4.19	49.5	574.8	13.53	13.3	4.13	58.1	592.3	15.35	12.7	4.29	80.4	693.0	14.16	10.7
28	4.90	50.4	565.9	12.14	13.4	4.98	55.8	589.0	12.91	12.6	5.14	71.5	724.4	17.43	10.4
29	7.91	111.0	741.2	13.32	9.4	7.78	122.9	774.8	15.05	8.9	8.12	141.7	868.1	16.49	7.9
30	3.41	34.0	537.0	13.25	14.8	3.36	46.3	568.2	13.86	13.6	3.75	65.9	619.9	11.62	12.1
31	3.50	35.2	513.3	11.90	15.3	3.42	44.6	517.2	11.54	14.8	4.21	88.7	644.3	13.14	11.1
32	8.91	88.4	770.9	13.08	9.5	3.68	110.2	757.9	11.88	9.4	10.24	159.3	875.9	12.66	7.7
SUM	4.02	51.4	530.2	10.72	14.2	3.96	57.2	535.7	10.94	13.9	4.27	77.1	664.2	13.61	11.1
BAG	4.57	55.8	563.0	10.80	13.3	4.52	63.8	587.1	10.65	12.6	4.99	100.2	727.9	12.69	9.8
33	1.18	28.9	72.1	0.13	73.2	1.05	28.4	71.6	0.12	74.2	1.05	32.2	76.3	0.21	68.1
34	13.49	332.8	858.3	0.96	6.2	12.75	344.1	871.3	1.01	6.1	12.46	383.9	839.9	1.28	6.0
35	7.17	176.3	556.6	0.64	10.4	6.77	182.0	515.1	0.75	10.8	6.74	210.6	560.1	0.48	9.7
36	4.52	121.3	423.2	0.37	14.1	4.38	122.3	410.3	0.46	14.4	4.21	138.5	430.0	0.36	13.4
37	3.07	28.5	385.3	4.12	20.2	2.91	27.6	368.3	4.10	21.1	2.75	35.8	429.7	6.43	17.9
38	2.90	38.2	427.5	7.37	17.9	2.93	40.1	441.4	7.60	17.3	3.04	51.3	586.9	12.46	13.1
39	2.63	28.7	515.8	12.70	15.6	2.53	28.9	513.7	12.59	15.6	2.59	25.4	679.0	18.42	12.2

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX G, CONT'D

LISTING OF LOADED VEHICLE TEST RESULTS ON

VEHICLE 158 1968 FORD TORI 390

DETROIT

MODE	---- IWT=3500, RLHP=12.3 ----					---- IWT=4000, RLHP=12.3 ----					---- IWT=4500, RLHP=27.3 ----				
NO.	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON
1	5.41	67.5	482.3	4.09	14.7	4.80	74.2	530.3	3.71	13.4	4.94	89.5	524.9	4.42	13.0
2	5.30	77.3	546.2	3.60	13.0	5.15	62.4	608.9	4.79	12.3	5.05	64.0	610.0	5.98	12.2
3	8.71	115.2	785.8	3.20	8.9	9.30	143.7	897.0	4.42	7.7	9.58	136.1	886.7	5.63	7.8
4	4.01	52.3	397.2	3.25	16.0	3.99	58.1	475.5	4.37	15.3	4.09	64.1	481.4	4.41	14.9
5	2.86	30.9	406.8	4.83	19.1	2.90	26.9	480.2	6.05	16.7	3.13	34.1	512.2	7.66	15.4
6	2.76	31.3	401.1	3.89	19.3	2.73	19.9	412.6	4.94	19.6	2.03	35.2	463.9	6.24	16.9
7	2.99	24.5	469.7	8.11	17.1	3.20	34.7	544.6	7.28	14.6	4.31	56.8	575.6	6.77	13.1
8	2.81	26.1	479.7	6.15	16.8	2.96	34.7	484.5	6.44	16.2	4.03	87.5	607.5	9.17	11.7
9	3.15	23.0	471.4	8.03	17.2	3.32	26.8	535.6	8.31	15.1	4.19	50.4	637.6	11.45	12.2
10	3.58	34.3	517.4	6.23	15.2	3.02	32.5	535.3	8.13	14.9	4.34	28.8	712.7	14.79	11.5
11	3.65	37.9	519.2	9.11	15.0	3.11	37.2	552.0	10.40	14.3	4.15	36.6	635.1	10.50	12.6
12	4.33	44.6	638.2	8.27	12.3	4.56	39.2	631.4	8.86	12.5	4.86	36.4	854.9	14.81	9.5
13	4.36	43.5	581.0	9.65	13.4	4.71	46.7	705.1	12.27	11.2	4.88	50.8	761.0	14.19	10.4
14	3.15	34.6	479.6	5.71	16.3	3.32	34.2	495.2	6.46	15.9	3.58	25.1	645.4	11.84	12.7
15	5.69	31.6	493.9	3.75	15.8	5.91	52.0	486.4	4.27	15.1	6.08	50.8	613.2	7.62	12.5
16	12.83	133.9	892.1	4.36	7.8	13.36	163.4	908.9	5.13	7.3	13.85	182.8	994.9	8.71	6.7
17	4.24	57.7	462.7	5.62	15.7	4.54	72.2	514.5	6.77	13.8	4.27	67.3	581.5	9.15	12.7
18	3.76	35.5	473.0	4.56	16.4	3.81	40.6	519.5	5.71	14.9	4.03	51.6	580.1	8.09	13.2
19	4.09	44.4	452.0	5.23	16.6	4.14	57.0	474.3	6.60	15.4	4.16	61.1	556.1	8.10	13.3
20	4.59	61.1	569.2	5.42	13.1	4.71	43.7	596.8	6.75	13.0	5.46	73.9	672.2	8.96	11.0
21	3.74	39.1	597.1	10.82	13.2	2.58	75.3	689.5	9.62	10.9	5.32	110.3	649.4	7.78	10.6
22	4.27	44.1	599.4	7.17	13.0	4.84	51.9	614.6	6.66	12.5	4.90	84.9	761.9	11.84	9.7
23	7.96	80.6	656.8	6.33	11.0	9.20	115.9	708.1	8.30	9.7	7.53	130.2	788.8	9.19	8.7
24	3.13	32.5	433.4	7.68	18.0	3.44	35.2	492.9	8.37	15.9	3.44	46.3	536.0	9.33	14.3
25	3.22	36.6	468.5	6.09	16.6	3.24	32.2	500.0	6.55	15.8	3.53	35.1	643.4	10.62	12.5
26	8.11	83.2	678.5	5.38	10.6	8.53	69.3	708.5	6.31	10.5	8.17	75.3	861.3	9.99	8.8
27	3.80	45.6	522.1	8.63	14.7	3.97	47.0	596.5	9.94	13.0	3.93	47.0	686.8	13.21	11.5
28	4.22	45.0	513.2	5.96	14.9	4.40	43.2	554.3	6.34	13.8	4.48	36.3	726.5	11.46	11.1
29	7.06	86.7	595.5	5.24	11.8	7.39	103.8	811.0	6.09	8.9	7.27	108.5	711.2	8.05	9.8
30	3.05	32.6	473.8	7.02	16.6	3.19	36.0	514.6	8.29	15.3	3.31	49.5	491.9	9.72	15.3
31	3.14	36.2	495.4	6.54	15.8	3.33	35.6	538.0	6.94	14.7	3.98	65.7	658.2	9.67	11.5
32	8.25	87.0	708.7	6.34	10.2	8.69	68.4	756.6	7.01	10.0	9.36	92.7	881.5	10.28	8.4
SUM	3.53	38.0	501.5	6.26	15.5	3.59	42.2	522.7	6.64	14.8	3.89	41.5	620.5	10.38	12.7
HAG	3.77	40.8	515.4	6.82	15.0	4.15	43.9	567.2	7.82	13.7	4.58	64.3	673.7	9.89	11.2
33	1.19	21.6	82.7	0.14	73.8	1.10	19.7	83.2	0.04	75.5	0.94	16.2	78.4	0.05	83.1
34	13.57	178.4	1331.6	4.76	5.4	13.22	250.4	1016.7	1.25	6.1	11.51	181.1	1009.8	1.62	6.7
35	6.10	86.5	562.6	0.55	12.4	6.59	108.8	536.7	0.60	12.2	5.60	88.2	514.3	0.68	13.2
36	3.99	66.7	375.1	0.37	18.0	3.90	62.4	359.9	0.38	18.9	3.74	53.1	391.5	0.71	18.2
37	1.90	14.8	372.4	1.62	22.1	1.90	13.6	370.8	2.50	22.3	2.13	6.0	425.0	4.39	20.1
38	2.03	12.9	421.9	4.66	19.8	2.21	18.1	413.8	4.66	19.8	3.21	28.7	520.3	8.65	15.4
39	2.85	27.9	509.8	7.83	15.8	2.96	38.4	476.7	6.99	16.2	2.85	10.9	635.7	15.00	13.4

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX G.CONT'D

LISTING OF LOADED VEHICLE TEST RESULTS ON

VEHICLE 159 1968 MERC COUG 302

DETROIT

MODE NO.	---- INT=3500, RLHP=12.3 ----					---- INT=4000, RLHP=12.3 ----					---- INT=4500, RLHP=27.3 ----				
	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON
1	3.57	56.9	467.3	6.05	15.6	3.57	47.7	530.5	7.84	14.4	4.15	64.5	538.3	10.00	13.6
2	3.66	33.8	523.2	6.19	15.1	3.80	30.5	557.4	6.31	14.4	4.34	34.6	635.8	9.91	12.6
3	5.80	98.4	816.3	6.04	9.0	6.28	96.8	859.0	7.60	8.6	7.41	130.3	910.9	11.44	7.8
4	2.65	30.9	440.5	6.27	17.8	2.87	33.2	466.0	7.01	16.8	3.10	29.7	506.0	9.82	15.8
5	2.17	10.6	420.2	9.29	20.0	2.26	10.6	425.4	9.29	19.8	2.43	9.2	492.4	12.53	17.2
6	2.03	11.2	392.5	6.54	21.3	2.16	7.0	411.0	7.02	20.7	2.54	7.0	520.9	11.61	16.4
7	2.19	14.7	455.7	10.84	18.3	2.34	11.7	473.6	11.33	17.8	3.19	38.5	580.1	12.31	13.6
8	2.03	9.6	459.1	9.23	18.5	2.22	8.8	467.3	9.94	18.2	3.23	38.7	644.7	13.88	12.4
9	2.33	10.7	456.6	10.47	18.5	2.43	8.4	472.7	10.24	18.0	3.15	20.1	623.1	16.84	13.4
10	2.46	12.9	498.1	9.24	16.9	2.61	8.3	511.5	9.76	16.7	3.51	15.9	733.1	17.75	11.5
11	2.27	18.3	499.6	10.99	16.6	2.56	21.1	529.9	11.85	15.5	3.73	25.5	628.5	13.45	13.0
12	3.02	17.4	621.1	12.44	13.5	3.27	12.6	657.7	12.53	12.9	4.75	41.4	875.7	19.67	9.3
13	2.83	25.0	565.5	13.32	14.5	3.28	26.8	602.4	14.79	13.6	4.20	47.7	779.0	18.64	10.2
14	2.09	11.4	477.6	9.52	17.7	2.40	8.6	480.6	10.14	17.7	3.56	27.2	657.2	16.34	12.5
15	3.23	26.6	639.2	6.55	12.8	3.78	23.1	518.6	6.94	15.7	5.63	39.6	662.5	13.19	12.0
16	7.29	114.3	1012.3	8.18	7.3	8.90	112.5	1019.4	9.61	7.2	12.32	121.3	1226.5	16.27	6.1
17	2.75	39.0	496.7	10.26	15.7	2.94	37.6	498.9	10.19	15.6	4.13	49.6	575.6	13.25	13.3
18	2.47	19.3	484.9	8.33	17.0	2.54	13.7	495.1	8.46	16.9	3.64	17.5	628.4	13.78	13.3
19	2.45	31.4	459.6	8.84	17.2	2.58	22.9	494.8	9.86	16.5	3.30	30.0	574.3	14.04	14.0
20	3.09	27.7	550.8	9.58	14.7	3.11	15.7	573.6	9.74	14.6	4.10	19.5	739.7	15.74	11.3
21	2.52	31.6	531.9	12.97	15.1	3.51	69.8	564.0	10.43	13.0	4.40	92.1	676.6	12.74	10.6
22	2.74	21.8	582.2	11.29	14.2	3.34	31.5	596.2	10.81	13.5	4.90	58.8	791.0	18.12	9.9
23	4.52	66.6	706.6	12.86	10.8	5.14	62.7	744.8	13.32	10.3	6.90	89.4	846.5	19.13	8.4
24	2.05	13.4	435.4	10.87	19.2	1.54	9.5	457.9	10.49	18.6	2.92	13.7	557.2	16.86	15.1
25	2.02	10.2	472.4	10.10	17.9	2.14	5.6	472.4	9.91	18.2	3.02	11.9	656.6	17.96	13.0
26	5.05	46.3	724.9	9.93	10.9	5.53	31.8	747.6	9.93	10.9	6.93	36.0	936.0	19.59	8.7
27	2.37	23.4	506.8	11.88	16.1	2.61	18.4	547.7	13.37	15.2	3.60	26.3	682.7	19.01	12.1
28	2.54	19.8	525.0	9.79	15.7	2.70	11.8	546.5	9.82	15.5	3.74	14.2	750.8	19.28	11.3
29	4.02	28.7	643.7	11.30	12.6	4.39	58.7	650.5	11.70	11.7	5.74	62.6	805.0	19.38	9.6
30	2.22	23.0	433.5	9.99	18.6	2.07	9.9	462.3	11.46	18.3	3.01	19.7	561.3	15.27	14.8
31	2.17	15.3	453.6	9.35	18.3	2.12	6.9	513.0	10.28	16.7	3.40	31.5	667.0	15.80	12.2
32	5.39	59.3	692.2	8.88	11.1	5.27	32.7	762.3	10.05	10.7	7.34	59.3	959.4	17.71	8.3
SUM	2.26	17.5	488.0	9.46	17.0	2.34	16.5	496.1	9.56	16.8	3.19	24.8	637.9	14.55	12.9
BAG	2.41	18.9	518.2	8.76	16.0	2.55	22.0	544.0	9.01	15.1	3.57	37.8	695.3	11.64	11.6
33	0.59	15.2	96.0	0.57	72.9	0.50	15.1	83.8	0.18	81.4	0.77	17.2	92.3	0.48	72.9
34	5.96	185.9	954.3	1.59	7.0	5.85	182.2	986.0	1.48	6.9	8.40	208.8	948.2	2.59	6.8
35	2.44	63.3	573.0	0.26	13.0	2.53	70.1	566.6	0.61	13.0	3.97	69.9	602.3	1.16	12.2
36	1.65	21.7	514.2	1.15	16.0	1.42	18.6	514.2	0.86	16.2	2.52	29.5	489.6	1.23	16.3
37	1.70	5.1	356.5	3.88	24.0	1.56	4.0	326.9	3.20	26.1	2.25	3.9	411.0	7.65	20.9
38	1.62	4.5	395.9	6.97	21.7	1.56	4.4	390.2	6.74	22.1	2.27	4.5	540.3	13.48	16.0
39	1.56	4.6	456.5	11.29	18.9	1.54	4.5	458.1	11.46	18.9	1.73	5.3	632.2	15.47	13.7

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX G,CONT'D

LISTING OF LOADED VEHICLE TEST RESULTS ON

VEHICLE 165 1967 BUIC LESA 340

DETROIT

MODE	---- IWT=4000, RLHP=12.0 ----					---- IWT=4500, RLHP=12.0 ----					---- IWT=5000, RLHP=29.0 ----				
NO.	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON
1	12.85	99.7	456.4	3.04	13.6	13.46	123.4	321.2	2.60	15.9	11.60	122.7	306.6	2.71	16.6
2	10.08	139.7	497.7	2.15	11.8	10.63	195.5	492.7	1.44	10.6	9.88	206.9	539.8	2.10	9.9
3	15.02	160.7	615.2	1.76	9.7	23.98	272.7	647.0	1.88	7.7	24.27	283.4	646.6	2.10	7.6
4	8.05	92.3	354.8	1.95	16.9	7.83	126.9	360.9	2.33	15.2	8.31	135.9	409.8	2.81	13.7
5	4.21	68.4	377.1	3.52	17.8	4.28	93.7	384.5	3.34	16.3	4.69	115.2	442.1	2.99	13.9
6	4.08	78.4	365.2	2.41	17.7	4.30	108.9	374.1	1.97	15.9	4.73	130.6	477.0	3.04	12.7
7	5.12	71.5	432.8	4.73	15.8	5.47	97.5	440.7	5.05	14.5	6.23	114.7	544.4	6.08	11.9
8	4.54	99.9	432.4	3.97	14.7	4.71	123.4	462.4	3.86	13.2	6.41	180.6	657.6	5.82	9.2
9	5.75	84.1	412.0	3.97	15.8	5.64	57.8	477.0	4.03	15.2	7.06	119.3	593.5	7.58	11.0
10	6.14	97.7	446.4	3.75	14.3	6.71	115.1	458.5	3.73	13.4	8.11	176.7	698.0	5.98	8.9
11	7.54	108.4	465.8	3.86	13.4	8.03	125.1	494.4	5.03	12.4	9.61	174.9	652.8	5.63	9.3
12	7.46	122.3	576.3	5.01	11.2	7.99	159.9	577.1	4.75	10.4	10.31	237.5	848.7	6.76	7.1
13	9.72	126.3	569.8	4.28	11.1	10.01	147.0	587.0	4.82	10.4	11.98	203.1	741.3	6.21	8.1
14	5.82	108.7	407.4	3.24	14.9	5.98	122.6	437.9	3.24	13.7	7.48	183.7	623.3	4.73	9.5
15	14.62	113.1	406.9	2.02	14.1	15.31	148.5	408.1	1.69	12.9	17.97	186.3	558.9	2.67	9.8
16	39.58	259.4	714.8	2.56	7.1	40.12	370.3	725.1	2.05	6.2	47.29	431.6	887.1	3.33	5.2
17	10.88	117.0	471.9	2.60	12.9	10.79	162.4	464.3	3.15	11.8	13.23	190.8	555.9	2.84	9.4
18	7.38	131.3	433.6	1.88	13.4	7.38	166.6	432.6	1.72	12.4	9.22	184.6	525.4	2.63	10.5
19	9.45	115.5	430.4	2.35	13.8	9.70	149.2	441.3	2.64	12.6	11.69	166.5	554.3	2.91	10.7
20	9.33	154.1	478.4	1.98	11.8	9.81	192.1	491.7	1.98	10.8	11.38	222.3	629.4	3.19	8.7
21	8.99	112.6	557.5	5.35	11.6	9.39	165.0	568.9	5.56	10.3	10.43	205.5	658.0	5.01	8.8
22	8.05	115.2	519.1	3.89	12.2	8.87	168.2	549.0	4.07	10.5	9.97	232.6	728.1	4.89	7.9
23	19.95	138.0	631.3	4.68	9.7	21.81	207.2	649.6	4.46	8.5	23.34	257.1	752.6	3.95	7.2
24	5.44	90.6	424.5	3.69	15.2	5.97	105.2	441.4	3.32	14.2	8.44	144.9	557.3	4.16	10.9
25	4.88	88.6	409.8	3.19	15.7	5.41	95.5	410.4	2.87	15.4	6.94	149.0	572.8	4.44	10.7
26	20.12	142.9	557.6	2.81	10.5	20.07	199.8	748.8	2.31	7.9	22.19	234.2	711.8	3.75	7.7
27	8.58	108.9	514.9	2.71	12.4	9.02	146.8	506.9	1.00	11.6	9.80	178.7	669.5	5.05	9.0
28	8.35	102.2	456.4	3.68	13.8	9.15	133.2	453.5	4.18	12.8	9.52	171.4	652.5	4.88	9.3
29	19.77	123.9	560.9	3.83	10.9	20.72	189.0	556.0	6.36	9.7	21.73	238.3	679.2	3.83	7.4
30	5.55	72.5	443.4	3.36	15.4	6.14	134.9	442.6	1.55	13.2	6.69	155.2	559.7	4.08	10.8
31	5.14	109.2	429.5	3.15	14.4	5.49	138.4	447.4	2.91	13.0	6.21	155.3	598.8	4.97	10.3
32	17.82	157.1	602.8	2.68	9.8	19.10	362.2	573.1	8.52	7.4	20.65	239.4	737.8	4.38	7.5
SUM	6.42	103.3	434.4	3.28	14.4	6.50	122.7	441.4	3.57	13.6	7.84	147.2	584.0	5.31	10.6
HAG	8.39	111.9	471.1	3.66	13.2	8.76	146.1	492.3	3.55	11.8	9.92	184.7	636.9	4.87	9.3
33	2.59	26.5	47.9	0.03	91.4	2.74	23.3	48.4	0.04	94.3	3.14	22.1	47.9	0.07	95.8
34	27.79	306.8	562.3	0.31	7.8	26.89	282.0	628.4	0.37	7.7	30.99	216.4	520.8	0.26	9.3
35	12.47	217.7	405.5	0.10	11.3	13.36	203.6	381.0	0.10	11.9	13.54	193.9	409.0	0.21	11.7
36	5.51	141.4	311.6	0.10	16.1	6.65	158.4	288.8	0.10	15.9	7.17	165.1	311.9	0.16	14.9
37	3.21	87.3	298.7	0.47	19.9	0.36	92.0	289.5	3.23	20.4	3.95	96.4	356.6	1.04	17.0
38	3.40	98.1	342.1	1.62	17.5	3.42	96.7	350.1	1.80	17.3	3.87	95.1	480.9	4.90	13.8
39	3.17	80.1	414.6	4.99	16.1	3.18	81.2	418.4	4.95	16.0	3.62	85.3	612.9	9.70	11.7

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX G,CONT'D

LISTING OF LOADED VEHICLE TEST RESULTS ON

VEHICLE 166 1967 CADI DEVI 429

DETROIT

MODE NO.	---- INT=5000, RLHP=14.7 ----					---- INT=5500, RLHP=14.7 ----					---- INT=6000, RLHP=32.0 ----				
	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON
1	7.61	93.1	452.8	2.24	14.2	7.23	116.3	462.3	2.10	13.3	7.52	134.3	535.1	2.30	11.5
2	8.86	141.2	625.0	2.79	10.1	8.71	160.3	625.2	2.64	9.8	8.14	157.3	704.0	4.06	9.1
3	14.25	181.2	861.0	3.13	7.5	13.68	210.7	873.6	2.96	7.1	12.83	203.2	973.1	4.19	6.7
4	6.03	92.5	500.7	3.59	13.3	5.88	105.3	493.0	3.83	13.1	5.62	119.5	551.0	4.34	11.7
5	4.33	72.5	497.7	5.37	14.2	4.38	92.4	466.2	4.39	14.2	4.47	139.4	522.8	3.49	11.7
6	4.38	55.6	457.9	4.94	15.9	4.33	73.8	456.4	4.24	15.1	4.31	93.7	582.3	6.64	11.9
7	5.84	152.8	533.7	4.15	11.2	5.84	165.4	518.5	4.23	11.1	5.82	185.7	647.0	5.98	9.3
8	4.75	88.5	526.0	6.48	13.0	4.83	99.8	540.2	6.67	12.5	4.85	122.9	730.0	9.43	9.5
9	5.58	114.7	525.1	5.39	12.3	5.66	118.7	515.7	5.45	12.3	5.40	148.4	674.0	7.89	9.6
10	6.19	78.6	558.3	7.18	12.7	6.20	85.0	575.7	7.44	12.2	6.07	119.3	808.8	10.51	8.7
11	6.39	169.4	559.7	3.89	10.5	6.89	220.4	569.7	3.48	9.5	6.69	241.6	677.4	3.96	8.2
12	7.22	107.3	689.5	8.96	10.1	7.73	127.5	700.1	8.65	9.6	7.58	197.4	963.9	10.16	6.8
13	7.40	201.5	622.0	4.18	9.2	7.98	231.4	654.2	4.05	8.5	7.45	287.5	789.2	4.85	7.0
14	5.34	98.8	536.7	6.15	12.5	5.71	107.6	520.3	5.55	12.5	5.67	135.0	690.9	7.98	9.6
15	10.55	127.4	524.9	3.80	11.7	11.36	128.8	517.2	3.56	11.7	13.99	162.9	654.4	4.80	9.3
16	24.13	293.9	1064.9	5.19	5.5	25.57	292.3	1029.3	5.13	5.7	23.26	348.4	1256.3	6.49	4.7
17	6.71	174.0	506.5	2.74	11.1	7.15	193.7	519.9	2.26	10.5	7.18	244.2	524.4	2.00	9.5
18	6.27	118.8	541.5	4.36	11.9	6.63	128.0	560.6	4.53	11.3	6.57	188.6	663.4	4.94	9.1
19	6.79	126.3	512.6	4.27	12.1	7.13	169.0	487.6	2.86	11.4	6.79	205.4	489.7	2.32	10.6
20	8.43	146.9	639.2	5.24	9.9	8.75	165.1	663.0	4.77	9.3	8.47	212.6	780.6	5.73	7.8
21	7.11	213.5	561.3	3.94	9.7	7.47	237.6	619.6	4.01	6.7	7.69	300.5	656.5	3.28	7.7
22	7.64	138.1	657.9	6.98	9.9	7.87	148.2	658.1	6.85	9.7	8.25	210.6	825.5	8.06	7.5
23	12.12	154.3	760.4	7.43	8.5	12.41	163.7	824.5	7.51	7.9	12.56	252.6	959.2	6.86	6.4
24	5.17	131.3	493.7	4.21	12.4	5.43	160.5	521.6	3.48	11.2	5.72	228.2	563.8	3.02	9.4
25	4.76	86.6	530.9	5.95	13.0	5.21	103.7	523.6	6.13	12.6	5.46	140.3	653.8	7.45	10.0
26	14.05	176.3	772.0	5.69	8.1	15.45	186.7	745.7	5.60	8.2	14.27	234.6	916.4	6.83	6.7
27	6.14	167.1	568.5	4.68	10.4	6.79	205.7	581.4	3.90	9.6	7.33	291.1	660.6	2.93	7.8
28	6.94	99.8	597.1	7.22	11.4	7.64	105.5	597.3	6.97	11.3	7.67	170.1	736.6	8.63	8.6
29	10.89	134.1	699.8	8.27	9.4	11.71	153.3	780.4	6.47	8.4	10.60	214.2	880.7	6.62	7.1
30	5.43	169.7	514.1	3.90	11.1	5.81	223.4	561.5	3.05	9.5	6.08	274.0	595.1	3.04	8.5
31	5.04	113.6	536.5	5.35	12.1	5.46	114.9	503.4	5.63	12.7	5.88	167.8	683.3	6.51	9.2
32	13.18	189.6	767.7	5.24	8.0	14.75	190.2	712.3	5.52	8.4	14.49	251.2	932.3	6.23	6.5
SUM	5.27	104.8	534.7	5.74	12.4	5.46	116.2	543.3	5.66	11.9	5.62	146.1	667.6	7.31	9.7
RAG	5.85	136.1	586.5	5.05	10.8	6.35	158.0	599.8	4.97	10.2	6.51	204.4	731.9	5.93	8.3
33	0.52	8.9	82.8	0.13	90.1	0.58	11.2	88.6	0.17	82.1	0.62	14.6	82.5	0.13	82.7
34	9.82	126.2	1032.0	1.38	7.0	9.54	166.9	1128.1	1.85	6.2	12.38	235.6	1168.8	2.22	5.6
35	3.80	56.3	570.6	0.48	13.2	3.78	67.1	596.5	0.37	12.4	4.83	82.1	629.9	0.56	11.5
36	5.47	144.3	419.5	0.35	13.4	5.34	109.2	441.3	0.28	14.1	5.19	147.0	470.6	0.49	12.4
37	3.58	86.5	336.7	0.93	18.3	3.48	87.9	335.4	0.88	18.3	3.94	97.6	400.0	1.78	15.7
38	3.03	56.1	444.8	5.17	16.4	2.92	53.8	455.4	5.54	16.2	3.15	49.6	579.7	9.66	13.3
39	2.76	37.3	524.9	10.31	15.0	2.72	35.6	529.5	10.61	14.9	3.10	33.9	710.9	14.15	11.5

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX G,CONT'D

LISTING OF LOADED VEHICLE TEST RESULTS ON

VEHICLE 169 1967 CHEV IMPA 283

DETROIT

MODE NO.	---- IWT=4000, RLHP=12.0 ----					---- IWT=4500, RLHP=12.0 ----					---- IWT=5000, RLHP=27.4 ----				
	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON
1	6.50	86.0	347.2	2.91	17.6	5.55	66.0	367.8	3.35	18.1	4.87	67.5	360.3	3.08	18.4
2	7.30	116.0	531.0	2.66	12.1	8.27	126.2	541.2	2.97	11.6	6.41	110.9	591.2	3.57	11.3
3	12.50	187.2	693.2	3.13	8.6	12.79	179.4	776.2	3.35	8.1	10.96	162.4	827.3	4.47	7.9
4	5.27	82.6	383.7	3.50	16.7	5.12	83.8	423.4	2.14	15.5	4.59	69.1	465.3	4.16	15.1
5	3.91	62.3	388.3	4.88	17.8	3.66	63.5	420.4	3.86	16.7	3.97	77.3	468.0	4.93	14.7
6	4.07	65.1	396.1	2.79	17.4	3.92	62.1	392.7	4.09	17.7	4.47	99.1	487.7	4.33	13.5
7	5.08	101.9	414.4	5.29	15.0	4.32	89.2	455.6	4.37	14.6	5.88	131.6	572.4	7.28	11.1
8	4.50	82.3	429.4	3.55	15.5	4.50	87.1	448.2	5.32	14.8	5.23	115.9	622.7	7.34	10.8
9	4.66	66.7	441.9	6.75	15.8	4.59	68.4	457.8	5.82	15.3	5.69	116.3	587.6	8.02	11.3
10	5.46	69.9	486.4	4.10	14.5	5.36	72.1	503.1	6.40	14.0	6.26	124.3	689.8	8.72	9.8
11	5.62	108.2	440.2	6.21	14.1	5.20	110.7	499.6	5.77	12.9	6.59	159.7	603.8	7.12	10.1
12	6.75	93.9	565.2	5.14	12.1	6.53	100.5	601.0	7.58	11.4	7.98	169.3	828.2	9.55	7.9
13	6.70	129.3	523.7	6.18	11.9	6.75	135.6	582.0	6.50	10.9	8.14	187.3	674.8	8.13	8.9
14	4.80	74.1	420.8	4.31	16.1	5.18	86.6	442.5	6.85	14.9	6.00	127.3	546.2	7.20	10.9
15	8.28	91.4	436.9	2.96	14.6	8.28	99.5	459.7	3.27	13.8	9.59	142.9	589.5	4.80	10.5
16	19.14	219.3	825.9	3.89	7.2	19.03	204.9	867.1	4.67	7.1	20.75	292.3	1018.0	6.10	5.8
17	5.77	110.3	419.8	3.79	14.5	5.83	129.4	494.9	4.00	12.4	6.68	153.1	461.4	3.86	12.3
18	5.52	89.7	440.8	3.22	14.8	5.82	123.3	448.8	3.74	13.4	6.55	164.3	558.6	4.35	10.6
19	5.57	81.0	405.3	3.97	16.1	5.94	119.5	451.8	3.90	13.5	6.29	130.8	452.9	3.90	13.1
20	6.89	97.3	521.2	4.50	12.8	7.72	144.7	496.4	3.96	11.9	8.40	198.2	660.6	5.31	8.9
21	6.18	139.6	496.7	5.87	12.1	7.01	147.0	567.6	7.00	10.8	7.27	177.6	584.9	5.95	10.0
22	6.29	102.1	540.8	5.01	12.3	6.92	112.7	521.3	6.71	12.3	7.62	179.0	717.6	7.60	8.7
23	10.11	137.6	642.2	5.94	10.0	10.79	138.4	676.3	6.28	9.6	12.56	205.6	842.9	7.42	7.4
24	4.19	64.5	450.4	5.73	15.7	4.32	70.4	495.9	6.27	14.3	5.74	142.8	510.6	5.37	11.8
25	4.11	58.6	434.6	4.92	16.4	4.33	61.0	434.6	6.09	16.3	5.34	133.0	577.7	6.80	11.0
26	11.51	119.2	666.1	5.05	10.0	12.42	119.2	640.4	5.69	10.2	12.56	218.1	807.6	6.44	7.5
27	5.32	95.3	499.8	6.12	13.3	5.63	128.1	521.0	5.69	12.0	6.86	182.5	588.5	5.85	9.9
28	5.91	82.5	484.6	4.86	14.0	6.16	77.4	501.9	6.11	13.8	6.94	147.4	639.6	7.30	9.9
29	9.52	123.6	641.1	5.93	10.3	9.32	101.1	641.1	6.61	10.7	10.27	172.6	742.4	7.41	8.5
30	4.30	65.4	502.3	6.80	14.3	4.57	105.8	456.2	4.49	13.9	5.66	151.9	501.7	4.71	11.7
31	4.39	68.8	412.9	4.33	16.6	4.70	83.5	450.6	5.42	14.9	5.24	141.7	566.9	6.30	11.0
32	10.70	125.7	613.7	4.56	10.5	11.75	127.5	645.9	5.36	10.0	5.32	228.2	783.7	6.59	7.7
SUM	5.02	80.1	451.3	4.75	15.0	5.13	85.0	472.2	5.28	14.3	5.68	117.1	583.0	6.84	11.3
BAG	5.72	93.9	487.1	4.97	13.6	6.04	101.6	511.4	5.44	12.9	6.94	147.5	628.4	6.56	10.1
33	1.26	21.4	67.9	0.17	84.1	1.23	17.0	66.3	0.10	91.6	1.21	18.5	73.6	0.18	83.3
34	15.48	248.0	727.8	0.53	7.6	13.33	195.2	759.0	0.58	8.0	12.42	179.4	771.7	0.69	8.1
35	7.20	105.6	450.9	0.29	13.9	6.75	91.0	447.9	0.32	14.5	6.32	76.3	495.2	0.40	14.0
36	4.80	80.8	327.9	0.33	18.9	4.48	69.5	340.7	0.39	19.1	4.05	58.0	359.8	0.42	19.1
37	3.53	50.9	309.1	1.23	22.2	3.91	57.0	328.2	1.66	20.6	4.32	83.0	341.3	1.49	18.3
38	3.55	60.5	363.3	3.35	18.9	3.54	55.3	387.5	3.09	18.3	4.07	66.0	517.5	6.49	14.0
39	3.53	54.6	452.1	6.63	16.2	3.47	53.9	463.4	7.24	15.9	3.47	53.6	638.1	11.31	12.1

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX G,CONT'D

LISTING OF LOADED VEHICLE TEST RESULTS ON

VEHICLE 170 1967 CHEV STA# 327

DETROIT

MODE NO.	---- IWT=4500, RLHP=13.2 ---- HC	CO	CO2	NOX	FUEL ECON	---- IWT=4000, RLHP=13.2 ---- HC	CO	CO2	NOX	FUEL ECON	---- IWT=5000, RLHP=29.0 ---- HC	CO	CO2	NOX	FUEL ECON
1	86.76	119.8	244.0	1.66	12.5	28.61	209.5	357.3	5.52	11.4	32.31	148.7	425.0	2.12	11.7
2	70.72	131.0	534.5	2.99	9.2	21.46	290.7	474.3	0.54	8.9	22.70	207.7	686.0	2.97	8.2
3	134.98	192.0	604.3	2.65	6.7	49.42	321.9	638.2	1.98	6.8	54.62	247.2	744.1	3.20	6.8
4	44.69	96.6	362.0	2.85	13.5	14.30	105.3	408.1	4.32	14.3	15.65	115.4	448.5	3.36	13.1
5	23.01	60.3	395.1	4.08	15.8	6.91	45.2	443.9	6.78	16.5	8.59	76.7	454.9	3.21	14.7
6	20.29	60.3	438.0	3.67	14.9	6.03	36.4	449.7	4.46	16.9	11.70	115.8	558.0	4.26	11.4
7	20.14	87.9	397.8	3.33	14.8	11.22	98.2	463.1	6.14	13.6	11.92	202.5	480.2	3.63	10.6
8	19.00	156.2	502.1	4.20	11.0	11.07	151.9	525.3	4.84	11.1	16.39	288.7	701.2	4.35	7.4
9	16.34	89.0	446.9	4.99	13.9	9.41	110.4	471.8	4.36	13.1	12.26	158.0	586.3	5.39	10.2
10	17.10	68.6	555.5	6.44	12.4	10.03	93.1	545.2	5.28	12.3	19.02	467.2	670.4	2.25	6.1
11	20.08	153.7	437.8	2.99	11.9	14.98	223.8	437.6	2.00	10.6	20.89	285.6	517.9	2.14	8.6
12	20.42	135.4	671.7	7.37	9.3	13.79	188.8	667.4	5.90	8.8	21.52	471.7	910.6	5.44	5.2
13	23.25	172.4	476.5	2.89	10.8	17.91	218.8	591.0	2.73	9.0	23.02	346.4	649.1	3.05	7.0
14	14.14	109.8	484.8	4.49	12.6	9.96	152.7	480.2	3.94	11.8	15.84	297.7	697.7	5.93	7.3
15	29.58	112.1	459.0	2.63	12.2	22.55	135.3	448.8	2.11	12.1	23.45	189.1	632.2	3.79	8.8
16	86.94	283.4	781.9	2.95	5.9	73.54	306.6	741.5	2.56	6.1	58.26	415.2	1058.9	4.51	4.7
17	26.03	130.4	395.9	2.56	13.0	22.22	186.5	323.2	2.18	12.9	17.46	229.3	442.5	1.65	10.3
18	17.60	104.0	479.1	3.18	12.7	13.20	125.2	489.0	2.61	12.2	12.91	218.9	646.7	4.22	8.6
19	20.60	101.5	382.7	2.68	14.6	18.10	175.6	400.2	1.66	12.1	13.99	216.8	500.3	1.66	10.0
20	20.17	109.5	559.3	3.83	11.2	16.51	171.7	2056.7	2.42	3.7	16.25	310.1	709.7	3.76	7.1
21	21.43	186.4	480.2	1.93	10.6	19.14	275.1	486.9	1.83	9.1	17.16	365.1	612.5	2.27	7.2
22	17.93	166.0	586.9	4.65	9.8	14.60	196.6	596.5	3.83	9.3	21.50	588.4	672.4	1.52	5.3
23	42.05	290.8	548.7	4.34	7.8	37.10	202.4	607.5	3.95	8.5	32.99	374.6	720.1	3.39	6.3
24	11.78	74.7	413.9	4.18	15.6	10.03	136.6	452.1	2.65	12.7	10.69	159.9	506.1	2.27	11.2
25	10.07	68.5	508.7	5.36	13.7	11.47	95.2	495.3	4.16	13.0	12.35	281.0	695.3	5.90	7.5
26	32.74	142.1	657.8	3.99	9.0	29.19	152.1	643.1	3.37	9.1	29.28	301.1	895.9	5.49	6.1
27	17.31	141.7	442.0	3.28	12.3	15.81	208.6	476.1	2.41	10.4	16.13	296.3	557.0	2.04	8.3
28	16.28	98.2	553.4	5.30	11.7	12.87	125.9	533.8	4.68	11.5	11.60	349.5	691.1	4.88	6.9
29	39.14	135.5	493.4	3.94	10.7	32.00	163.1	583.3	3.94	9.4	26.41	262.1	701.2	4.55	7.4
30	11.75	88.3	434.1	3.13	14.5	9.85	188.9	448.9	1.75	11.4	8.23	155.1	533.4	3.01	11.1
31	10.51	121.1	536.4	4.92	11.7	9.41	161.7	506.4	3.81	11.2	15.00	295.3	714.4	5.43	7.2
32	30.22	170.4	687.9	4.26	8.4	28.97	202.0	651.8	3.41	8.4	32.78	351.9	889.2	4.79	5.7
SUM	15.28	95.5	479.7	4.73	13.1	11.44	120.9	504.5	4.12	12.1	12.51	191.6	618.4	5.79	9.3
BAG	13.55	116.2	500.3	4.50	12.2	14.83	171.7	516.1	3.67	10.6	17.75	312.5	647.3	3.38	7.4
33	5.77	31.6	50.4	0.05	75.0	6.03	26.3	53.3	0.05	78.0	4.63	27.9	51.1	0.05	81.0
34	79.65	376.2	873.3	1.88	5.2	75.75	334.5	615.9	0.37	6.4	62.91	358.0	606.7	0.32	6.5
35	22.78	243.1	464.6	0.42	9.7	21.93	199.4	457.7	0.26	10.6	13.19	193.5	493.3	0.27	10.6
36	11.25	142.3	341.0	0.52	14.8	9.28	136.6	346.8	0.37	15.0	7.28	110.7	396.3	0.47	15.0
37	4.50	43.8	368.6	2.16	19.6	4.16	44.2	358.4	1.65	20.1	4.57	50.1	421.6	2.52	17.2
38	4.28	44.6	419.8	4.34	17.6	3.92	44.0	422.8	3.94	17.6	4.41	43.0	557.1	7.07	13.9
39	4.74	40.8	521.0	8.64	14.8	4.37	45.1	501.7	7.48	15.1	4.21	23.2	718.6	14.11	11.6

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX G,CONT'D

LISTING OF LOADED VEHICLE TEST RESULTS ON

VEHICLE 171 1967 CHRY NEWP 383

DETROIT

MODE NO.	---- IWT=4000, RLHP=13.2 ----					---- IWT=4500, RLHP=13.2 ----					---- IWT=5000, RLHP=29.0 ----				
	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON	HC	CO	CO2	NOX	FUEL ECON
1	4.35	85.6	564.5	3.59	12.4	4.20	123.9	587.4	3.47	11.2	4.69	72.7	533.9	3.25	13.4
2	4.71	85.1	697.0	3.11	10.5	5.17	81.3	700.7	3.94	10.5	4.72	125.1	716.8	3.40	9.6
3	7.16	103.2	1056.5	2.87	7.1	7.26	73.3	1094.9	4.36	7.2	7.57	171.0	1123.9	3.41	6.3
4	3.59	98.0	519.4	2.02	13.0	2.81	26.0	594.2	4.60	13.8	3.67	73.5	617.0	4.21	11.9
5	3.06	102.9	459.1	2.61	14.1	2.20	41.6	523.0	5.16	14.9	3.05	60.0	574.1	5.69	13.1
6	2.94	71.6	439.1	1.91	15.8	2.18	26.2	517.8	4.10	15.7	2.68	61.1	592.0	4.55	12.7
7	3.32	99.9	497.0	5.73	13.4	3.26	128.8	557.2	5.65	11.5	4.19	109.2	617.1	7.13	11.1
8	3.22	86.1	502.4	3.76	13.7	3.27	84.8	553.0	4.56	12.7	5.29	245.6	645.3	4.30	8.5
9	3.17	71.2	505.9	5.38	14.1	3.42	123.1	536.4	4.83	12.0	4.63	148.8	638.1	7.26	10.0
10	3.26	50.5	580.7	4.47	13.2	4.17	76.8	591.4	3.81	12.2	5.93	244.4	714.0	4.08	7.9
11	3.92	144.9	545.2	4.69	11.3	4.69	201.2	576.3	4.71	9.8	5.78	207.4	664.4	7.08	8.8
12	4.70	107.8	683.4	4.43	10.2	5.53	132.5	837.4	4.64	8.3	8.02	381.7	885.4	4.52	5.9
13	4.20	99.7	674.9	7.59	10.5	5.57	206.3	660.0	5.59	8.9	7.23	293.4	793.6	6.87	6.9
14	2.88	50.6	532.2	4.40	14.3	3.70	85.7	544.6	3.43	12.8	5.92	244.9	632.8	1.92	8.6
15	4.16	34.9	621.6	3.36	12.9	4.87	56.7	608.2	2.71	12.5	5.03	128.2	702.9	3.06	9.6
16	8.98	50.7	1220.0	5.00	6.7	9.97	85.2	1257.2	3.90	6.2	11.66	185.0	1427.2	4.55	5.1
17	3.53	77.8	609.9	6.55	11.9	4.69	166.4	578.3	4.22	10.4	5.47	216.9	610.9	3.94	9.2
18	2.97	41.9	581.6	4.13	13.5	4.28	133.4	567.1	2.49	11.2	5.90	243.0	608.1	1.87	8.8
19	3.07	56.2	574.4	5.91	13.2	4.44	142.0	517.1	3.44	11.8	5.57	193.0	579.7	3.84	9.9
20	3.42	39.5	702.5	5.23	11.4	5.50	168.1	655.3	2.74	9.5	5.68	159.7	792.5	4.79	8.4
21	4.63	160.1	614.0	7.20	10.1	5.48	203.9	617.9	5.69	9.3	6.41	255.5	713.1	6.94	7.8
22	5.17	111.1	649.8	4.58	10.6	6.11	188.0	619.7	3.35	9.5	7.91	319.6	760.4	3.58	6.9
23	6.71	88.7	867.7	7.31	8.6	7.68	142.7	853.6	6.52	8.1	9.63	329.3	938.6	3.43	6.0
24	2.82	57.4	537.0	6.21	14.0	3.35	98.8	540.4	5.65	12.6	5.63	234.8	553.3	3.36	9.4
25	2.68	44.6	529.5	4.42	14.6	3.31	68.5	547.8	4.11	13.3	6.49	276.5	601.4	2.40	8.4
26	5.61	48.0	865.3	4.54	9.3	6.57	61.0	881.2	4.43	8.9	9.48	196.9	970.1	4.30	6.8
27	3.51	80.5	594.0	6.71	12.1	4.86	192.2	587.0	4.74	9.8	6.87	279.8	687.4	5.35	7.7
28	4.01	62.2	629.4	4.73	12.0	5.25	49.6	601.5	3.32	11.5	6.95	236.9	720.5	2.96	8.0
29	5.25	45.6	826.6	7.01	9.7	6.80	101.8	819.8	5.71	8.9	8.16	212.3	907.7	5.71	7.0
30	2.61	49.7	531.3	6.58	14.4	3.51	112.8	541.1	5.68	12.2	4.92	189.6	592.4	5.47	9.8
31	2.84	54.6	584.0	5.14	13.1	3.61	86.1	571.9	4.19	12.3	6.35	242.5	606.3	3.25	8.8
32	5.52	49.3	912.9	5.85	8.8	6.72	82.7	878.4	4.69	8.6	8.82	196.1	961.5	4.50	6.8
SUM	2.82	57.3	577.9	4.84	13.1	3.25	85.0	583.9	4.11	12.2	4.55	155.2	687.0	5.16	9.4
BAG	3.65	83.3	597.0	4.90	12.0	4.48	129.9	619.2	4.43	10.6	5.98	232.7	707.7	4.65	8.1
33	0.45	1.5	108.6	0.04	78.9	0.49	2.7	110.7	0.04	76.2	0.49	2.6	109.5	0.03	77.0
34	5.40	12.2	1256.9	1.22	6.9	5.72	26.8	1335.1	1.59	6.4	5.25	12.0	1281.7	1.22	6.7
35	2.61	6.4	644.9	0.58	13.4	2.53	6.4	644.5	0.56	13.4	2.61	5.6	660.6	0.64	13.1
36	1.82	4.2	514.4	0.78	16.9	1.75	3.7	516.3	0.71	16.8	1.88	3.6	538.6	0.74	16.1
37	0.98	3.8	463.6	1.95	18.8	1.07	4.0	461.9	2.00	18.8	1.13	4.9	489.2	2.73	17.7
38	1.02	12.5	497.5	3.76	17.1	0.99	12.3	516.4	3.92	16.5	1.85	31.2	602.9	5.91	13.5
39	1.74	44.7	544.5	5.02	14.3	1.53	40.6	537.2	4.59	14.6	2.90	91.6	758.0	8.21	9.7

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

APPENDIX G,CONT'D

LISTING OF LOADED VEHICLE TEST RESULTS ON

VEHICLE 174 1967 FORD GALA 289

DETROIT

MODE NO.	---- IWT=4000, RLHP=12.0 ---- HC	CO	CO2	NOX	FUEL ECON	---- IWT=4500, RLHP=12.0 ---- HC	CO	CO2	NOX	FUEL ECON	---- IWT=5000, RLHP=27.4 ---- HC	CO	CO2	NOX	FUEL ECON
1	6.31	162.8	457.5	3.87	12.1	5.98	172.6	443.7	2.93	12.1	7.96	180.4	426.4	2.77	12.1
2	6.33	160.5	535.9	4.67	11.0	6.63	177.7	547.6	4.07	10.5	8.32	203.5	628.2	4.62	9.1
3	11.11	300.7	756.7	4.74	7.0	11.57	322.6	789.5	4.85	6.7	13.37	318.4	851.3	5.53	6.4
4	4.79	136.1	411.9	3.76	13.8	4.87	137.0	413.0	3.76	13.8	5.68	137.3	464.1	4.77	12.7
5	3.21	87.5	392.8	5.11	16.4	3.29	94.6	390.0	4.53	16.2	3.77	77.1	450.1	6.05	15.2
6	3.13	72.1	364.3	3.88	18.2	3.11	71.5	372.9	4.48	17.9	3.87	89.2	476.4	6.28	14.1
7	3.83	101.8	414.6	4.62	15.1	3.70	110.6	400.6	4.36	15.1	4.40	105.7	468.7	5.48	13.7
8	3.49	103.4	419.8	5.08	15.0	3.41	105.8	414.8	4.65	15.0	4.86	177.3	596.9	6.95	10.0
9	2.72	83.9	416.5	5.89	15.9	4.35	88.8	392.3	4.73	16.3	5.44	120.5	531.0	7.25	12.0
10	4.91	81.0	443.9	5.80	15.1	4.87	85.4	434.7	5.41	15.2	6.11	147.6	627.2	8.54	10.1
11	5.07	141.5	434.3	3.17	13.2	4.84	143.8	440.8	3.63	13.0	5.98	182.4	572.3	5.94	10.1
12	6.01	126.3	532.3	6.28	11.8	5.67	126.3	579.6	6.99	11.1	7.65	212.2	795.2	10.35	7.7
13	5.34	137.1	532.8	4.06	11.6	5.16	135.9	536.8	4.98	11.6	7.56	208.3	667.5	6.12	8.5
14	4.23	81.9	405.3	6.32	16.2	4.09	92.1	408.4	4.28	15.7	5.60	153.7	577.0	6.98	10.6
15	7.69	134.6	405.4	3.23	13.8	8.38	146.1	394.2	2.63	13.6	10.01	187.8	521.3	4.10	10.5
16	20.49	343.8	771.1	4.10	6.4	11.28	324.2	740.8	3.59	6.9	20.32	401.3	898.5	5.39	5.6
17	6.13	133.3	403.2	4.78	14.0	3.14	133.3	462.8	4.82	13.0	6.47	183.8	559.8	4.13	10.2
18	4.80	93.9	406.7	5.35	14.1	3.15	103.8	470.9	5.19	13.8	5.70	150.8	539.1	4.98	11.2
19	5.00	119.6	379.8	4.08	15.2	3.43	125.5	421.9	3.53	14.1	6.20	177.8	496.0	3.17	11.2
20	5.98	128.0	533.4	5.41	11.8	7.76	146.1	546.7	4.56	11.1	7.29	193.0	634.1	5.58	9.2
21	5.12	156.3	484.8	4.05	11.9	5.28	186.8	511.2	4.23	10.8	5.95	189.8	544.0	4.08	10.3
22	6.11	131.6	497.0	5.36	12.3	6.95	150.9	551.5	5.27	10.9	7.27	209.0	731.7	7.14	8.2
23	9.69	204.1	622.6	6.54	9.1	11.36	205.3	667.6	6.88	8.6	11.33	261.7	807.3	4.75	7.1
24	3.48	85.0	416.4	5.88	15.8	3.80	86.0	447.7	6.12	14.9	4.69	132.7	502.9	4.63	12.2
25	3.50	66.0	406.2	5.79	17.0	3.79	79.8	449.1	5.96	15.1	3.99	132.5	551.4	7.15	11.5
26	9.66	172.9	587.4	5.18	10.0	11.25	175.7	592.5	4.99	9.8	12.28	220.7	770.4	7.13	7.7
27	4.33	117.9	477.5	5.99	13.1	4.80	131.5	546.2	6.09	11.6	4.90	181.1	597.6	5.63	9.9
28	5.01	88.8	403.6	5.10	15.9	5.36	101.9	491.8	5.89	13.3	6.79	161.8	633.8	7.14	9.8
29	7.76	178.4	546.0	5.74	10.4	8.48	178.4	609.5	6.76	9.7	9.88	208.0	736.1	8.91	8.1
30	3.60	99.0	390.9	4.75	15.9	3.71	102.6	420.7	4.48	14.9	4.90	134.9	540.5	5.65	11.6
31	3.68	92.1	417.3	4.39	15.5	4.04	112.2	459.5	4.75	13.7	5.17	170.4	592.3	7.29	10.1
32	9.63	203.7	572.7	4.32	9.6	11.48	207.8	612.7	7.55	9.1	13.00	265.3	762.2	6.83	7.3
SUM	4.12	100.0	422.9	5.14	15.0	4.14	101.9	440.4	5.14	14.5	5.07	130.3	565.6	7.49	11.3
HAG	4.86	114.5	460.5	5.30	13.5	4.83	130.0	483.6	5.02	12.6	5.88	185.9	612.5	6.32	9.6
33	0.95	37.4	70.0	0.35	67.3	1.05	37.0	86.2	0.39	60.1	1.29	44.2	98.6	0.57	51.6
34	9.47	409.8	684.9	0.52	6.5	12.10	421.1	921.9	2.56	5.5	11.85	422.0	726.6	0.63	6.2
35	10.87	278.9	454.8	0.52	9.6	7.42	217.6	492.1	0.63	10.3	7.89	232.2	477.5	0.52	10.2
36	4.20	140.4	309.8	0.30	16.3	4.31	126.3	340.6	0.37	16.1	4.74	131.3	349.8	0.38	15.5
37	2.93	84.4	278.2	1.39	21.1	2.99	78.7	283.7	1.50	21.3	3.09	74.1	342.4	2.93	18.9
38	2.42	49.3	337.5	4.87	21.0	2.46	45.5	358.9	5.45	20.3	2.90	49.4	466.3	8.69	16.0
39	2.47	53.7	409.8	7.32	17.7	2.24	45.8	395.3	7.42	18.7	2.85	49.5	588.5	13.76	13.1

EMISSION RESULTS IN GRAMS PER MILE (PER MINUTE FOR IDLE)
FUEL ECONOMY IN MILES PER GALLON (MINUTES PER GALLON FOR IDLE)

FUEL ECONOMY CALCULATIONS ASSUME A 1:1.85 CARBON TO HYDROGEN RATIO

Appendix H - Listing of Individual Sound Level Tests

Legend

VEH NO. - Vehicle Number

YR - Model Year

MAKE - Vehicle Make

MODL - Vehicle Model

CID - Engine Displacement in Cubic Inches

T - Type of Transmission (1 : automatic, 3 : 3-speed manual, 4 : 4-speed manual, 5 : 5-speed manual)

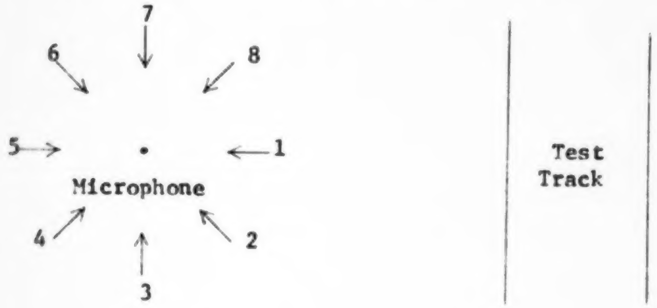
DB - Dry Bulb Temperature (degrees Fahrenheit)

WB - Wet Bulb Temperature (degrees Fahrenheit)

BAR. - Barometric Pressure (inches Hg)

WIND MPH - Wind Speed (miles per hour)

WIND DIR - Wind Direction (measured as shown below)



J986A (WOT) - Sound Level Measured Using the J986A Procedures (decibels)

1/4 G. - Sound Level Measured at 0.25 G Acceleration (decibels)

CRUISE 20 - Sound Level Measured at 20 MPH Cruise (decibels)

CRUISE 40 - Sound Level Measured at 40 MPH Cruise (decibels)

CRUISE 60 - Sound Level Measured at 60 MPH Cruise (decibels)

IDLE DB - Sound Level Measured at Idle (decibels)

IDLE FT - Distance from Vehicle to Microphone for Idle Sound Level Measurement (feet)

APPENDIX B

LISTING OF INDIVIDUAL SOUND LEVEL TEST RESULTS

SAN ANTONIO

VEH NO.	YR	MAKE	MODL	CID	T	DB	WB	BAR.	--WIND-- MPH	DIR	---SOUND LEVELS (DECIBELS)--- AMB	J986A (WOT)	1/4 S.	CRUISE (MPH) 20	40	60	IDLE DB	FT
01	69	TOYO	CORO	66	4	82	71	29.19	2	2	43	6	75	59	69	75	63	6
02	73	DODG	CORO	318	1	82	71	29.19	2	2	49	74	65	57	60	74	63	6
03	74	OLDS	CUTL	350	1	82	71	29.19	3	2	49	72	67	58	65	75	64	7
04	74	CHEV	CAMA	350	1	83	65	29.19	6	1	45	69	6	59	65	68	63	6
05	72	OLDS	CRUI	455	1	80	65	29.19	6	3	38	72	68	55	60	68	60	6
06	71	MERC	MONR	400	1	78	55	29.21	4	1	36	78	69	57	60	71	58	6
07	70	VOLK	SEDA	97	4	77	74	29.72	4	2	38	64	74	57	65	72	65	6
08	69	BUIC	SKYL	350	1	82	72	30.08	2	2	38	83	67	61	65	73	58	6
09	71	CHEV	IMPA	400	1	84	69	29.90	7	2	37	78	60	58	65	72	60	6
10	73	BUIC	CENT	350	1	84	70	30.04	2	1	37	76	6	58	65	72	57	6
11	68	BUIC	WILD	430	1	83	70	30.04	5	1	37	68	65	58	64	68	65	5
12	69	CHRY	IMPE	440	1	86	70	30.09	4	1	37	79	58	58	65	69	57	6
13	73	MERC	MARQ	429	1	90	64	29.21	4	3	38	69	67	58	61	67	59	5
14	72	CHEV	LAGU	350	1	90	64	29.21	6	1	39	75	68	55	63	69	58	4
15	72	DATS	STAW	97	1	84	70	29.96	7	2	45	60	62	56	64	70	57	6
16	71	CHEV	KING	350	1	84	70	29.96	7	1	45	68	6	57	64	70	54	6
17	71	FORD	LTD	400	1	84	70	29.96	6	2	45	78	70	54	64	70	53	6
18	70	LINC	MRK4	460	1	84	70	29.96	7	1	46	74	69	60	64	69	51	6
19	69	VOLK	SEDA	97	4	85	72	29.83	7	2	44	6	71	60	65	70	6	6
20	74	AMMO	GREM	232	1	85	72	29.83	6	2	44	65	64	57	65	70	52	6
21	72	AMMO	HORN	232	1	85	72	29.83	7	2	45	65	64	59	67	70	53	6
22	72	PLYM	BARR	318	1	85	72	29.83	7	2	44	76	68	57	65	70	63	6
23	73	OLDS	88	455	1	85	72	29.72	7	2	45	80	64	55	62	67	59	6
24	70	CHEV	MONT	350	1	85	72	29.72	7	2	45	76	67	57	63	68	61	5
25	68	OLDS	442	400	1	85	72	29.72	7	2	44	71	66	58	65	70	57	7
26	73	LINC	MRK4	460	1	80	74	29.64	4	2	39	74	66	56	64	68	57	6
27	73	AMMO	HORN	258	1	80	74	29.64	4	2	39	69	68	57	64	69	58	6
28	71	FORD	PINT	122	1	82	72	30.08	2	2	38	71	70	58	63	70	68	6
29	72	FORD	LTD	351	1	82	72	30.08	2	2	38	74	66	54	63	68	56	6
30	72	VOLK	411	103	1	82	72	30.08	2	2	38	78	69	60	6	71	64	6
31	73	OLDS	DELT	350	1	82	72	30.08	2	2	38	74	6	58	63	68	63	6
32	73	VOLK	SEDA	97	4	82	72	30.08	4	2	38	69	74	61	65	69	63	6
33	74	VOLK	SEDA	97	4	82	72	30.08	2	2	38	66	75	61	6	68	63	6
34	74	BUIC	LAND	455	1	84	70	30.04	2	2	37	74	67	56	63	67	62	6
35	73	FORD	GALA	351	1	84	70	30.04	2	2	37	72	64	50	63	68	56	6
36	72	FORD	CUST	351	1	84	70	30.04	2	2	37	70	63	54	63	70	51	6
37	74	FORD	PINT	122	4	84	70	30.04	4	1	37	67	69	58	65	70	59	6
38	69	DODG	CORO	318	1	84	70	30.04	2	8	37	74	63	57	65	69	60	6
39	70	CHEV	MALI	307	1	82	72	30.01	2	1	37	71	63	5	65	70	59	6
40	69	FORD	MUST	200	3	82	72	30.01	2	1	37	72	71	58	64	69	62	6
41	69	PONT	CATA	350	1	82	72	30.01	4	1	37	76	68	55	64	69	56	6
42	74	MERC	CAPR	122	4	85	69	29.92	4	2	38	72	68	58	64	69	60	6
43	69	OLDS	CUTL	350	1	85	69	29.92	4	2	38	74	6	56	65	69	61	6
44	74	TOYO	CORO	97	4	85	69	29.92	4	2	38	69	71	54	62	68	58	6
45	72	TOYO	CELI	120	4	85	69	29.92	4	2	38	66	72	55	62	67	53	6
46	74	CADI	COUP	472	1	84	69	29.90	7	2	37	7	67	5	62	6	57	5
47	74	BUIC	LESA	350	1	84	69	29.90	7	2	37	83	71	55	63	70	58	6
48	74	AMMO	MATA	304	1	84	69	29.90	7	2	37	70	67	56	64	69	60	6
49	71	CHEV	MONT	350	1	84	69	29.90	7	2	38	75	64	55	63	68	61	6
50	73	FORD	RANG	351	1	84	69	29.90	7	2	37	78	68	57	65	71	62	6
51	72	VOLK	STAW	103	4	84	69	29.90	7	2	37	68	72	60	6	71	67	6
52	73	TOYO	CELI	120	4	84	69	29.90	7	2	37	65	70	54	62	69	5	6
53	72	TOYO	CORO	97	4	84	69	29.90	7	2	38	69	62	56	62	70	60	6
54	73	CHRY	NEWP	400	1	84	69	29.90	7	2	38	72	6	55	62	67	59	6
55	69	FORD	TORI	351	1	84	69	29.90	7	2	37	73	66	58	65	70	54	5
56	74	TOYO	CORO	120	5	86	71	30.19	4	1	37	63	67	55	62	68	54	6
57	72	DATS	510	97	1	86	71	30.19	4	1	37	67	6	56	60	6	54	6
58	72	FORD	RANC	302	3	83	70	29.12	4	2	36	65	64	57	63	70	63	5
59	73	CADI	COUP	472	1	83	70	29.12	4	2	36	75	69	57	65	70	60	5
60	73	DODG	DART	225	1	91	6	29.15	7	7	42	73	6	59	6	71	60	6

APPENDIX H-CONT'D

LISTING OF INDIVIDUAL SOUND LEVEL TEST RESULTS

SAN ANTONIO

VEH NO.	YR	MAKE	MODL	CID	T	DB	WB	BAR.	--WIND-- MPH	DIR	AMB	J986A (WOT)	1/4 G.	CRUISE (MPH) 20	40	60	IDLE DB	FT
61	73	FORD	MAVE	302	1	81	65	29.15	8	7	42	72	65	56	63	68	61	5
62	73	OLDS	DELT	350	1	81	65	29.15	11	7	45	75	64	58	64	69	63	8
63	73	CHEV	NOVA	307	1	78	55	29.21	5	7	36	74	64	58	60	71	59	8
64	73	PONT	CATA	350	1	78	55	29.21	5	7	36	75	64	[illegible]	62	67	59	5
65	72	CHEV	MALI	307	1	78	55	29.21	2	3	35	76	67	58	65	70	62	8
66	73	FORD	PINT	122	1	78	55	29.21	7	1	37	75	68	59	67	72	56	8
67	74	FORD	PINT	122	4	78	55	29.21	2	8	34	64	70	55	62	69	62	8
68	72	PONT	GRNP	400	1	78	55	29.21	4	1	36	71	69	58	65	70	61	8
69	73	PLYM	SATA	318	1	78	55	29.21	6	7	34	73	63	56	64	68	56	8
70	73	CHEV	VEGA	140	3	79	57	29.20	7	3	38	66	70	57	6[illegible]	71	58	6
71	73	BUIC	ELEC	455	1	79	57	29.20	6	3	37	68	65	56	62	68	57	6
72	71	PONT	CATA	400	1	79	57	29.20	7	8	38	74	73	[illegible]	62	68	58	5
73	71	CHEV	NOVA	250	1	79	57	29.20	6	8	37	72	65	56	6[illegible]	73	[illegible]	8
74	74	FORD	GRAN	351	1	79	57	29.20	6	8	37	73	66	55	68	6[illegible]	68	8
75	71	PONT	GRNP	400	1	81	58	29.25	1	5	35	70	6[illegible]	57	64	69	61	8
76	[illegible]	CHRY	300	440	1	81	58	29.25	1	5	35	78	6[illegible]	57	63	67	59	*
77	74	CHEV	VEGA	140	3	81	58	29.25	1	3	35	65	69	58	63	69	59	6
78	73	CHEV	CAPR	400	1	81	61	29.27	7	1	37	77	68	57	64	68	58	3
79	73	PLYM	ROAD	440	1	81	61	29.27	7	1	37	80	[illegible]	59	65	69	66	5
80	73	FORD	THUN	429	1	81	61	29.27	7	1	37	69	60	52	61	67	57	8
81	73	FORD	MAVE	200	1	81	61	29.27	7	1	37	6[illegible]	61	56	63	68	[illegible]	8
82	72	PONT	GRNV	455	1	81	61	29.27	7	1	37	76	68	57	6[illegible]	70	61	5
83	71	DODG	DEMO	318	1	83	70	29.12	4	2	37	75	[illegible]	57	58	68	59	[illegible]
84	71	FORD	RANG	351	1	83	70	29.12	4	2	37	74	68	60	67	72	[illegible]	[illegible]
85	71	PONT	CATA	350	1	83	70	29.12	4	2	37	73	68	[illegible]	59	68	[illegible]	8

Appendix I - Data Sheet from Idle Contour Sound Level Measurements.

Each vehicle in this program was tested twice, once with the vehicle at normal idle and once with the vehicle idling at 1800 RPM. The data sheets identify the vehicle by number, model year, make and model. The test is then identified as to normal or 1800 RPM idle. The site in all cases is San Antonio, Texas. The sound level was then measured at 16 equally spaced radius lines (increments of 22.5 degrees) at 16 different distances from the vehicle. The individual measurements are identified on the data sheets by radius line and distance from center of vehicle.

Interior sound levels were measured at each idle and with the engine off with the windows both open and closed. These measurements are identified at the bottom of the data sheets.

FY73 Emission Factor Testing Program
Sound Level Testing
Decibel Contour Data Sheet

Vehicle Data

No. 001 Year 1969 Make Toyo Model Coro

Normal Idle 600 1800 rpm Idle ______ Site S.A.

Sound Level Readings (dBA)

AMB. 43.6

Distance from Center of Vehicle (feet)

Radius Line (Degs)	6	9	12	15	18	21	24	27	30	33	36	48	60	72	84	96
0.0		68.7	67.3	65.0	64.1	62.6	61.1	59.9	58.4	57.8	57.0	55.1	53.8	52.9	50.7	48.2
22.5		65.9	65.0	63.1	59.9	57.7	56.8	56.3	55.1	54.5	53.9	52.3	51.1	49.7	48.6	47.2
45.0		63.6	63.2	62.5	60.7	58.3	56.9	56.4	54.7	54.2	53.5	52.0	51.3	50.1	49.0	47.9
67.5	59.8	61.4	60.4	59.1	57.8	56.3	55.2	54.7	53.8	52.5	51.9	50.6	49.1	48.3	47.1	45.8
90.0	60.3	61.6	60.5	58.5	55.7	55.2	54.2	53.4	52.9	52.3	51.6	50.3	49.2	48.1	46.9	46.0
112.5	59.3	61.1	59.9	57.8	56.1	55.5	54.2	53.6	52.7	51.8	50.9	49.5	48.3	47.7	46.0	45.7
135.0		58.2	59.1	58.3	56.9	56.1	54.9	54.0	52.6	51.3	50.4	49.3	48.4	47.2	46.2	45.6
157.5		56.3	55.1	54.4	53.7	53.2	52.2	51.7	51.0	50.3	49.6	48.3	47.0	46.4	45.2	44.1
180.0		55.4	56.0	54.9	54.2	53.4	52.5	52.0	51.3	50.0	49.8	48.9	48.0	46.7	45.1	44.3
202.5		55.3	56.0	55.4	54.4	53.3	52.6	52.0	51.4	50.6	49.3	48.1	47.0	45.9	44.7	44.0
225.0		56.6	58.2	57.1	56.7	56.1	55.3	54.7	53.6	52.7	52.0	50.5	49.1	48.0	46.7	45.3
247.5	57.8	60.7	59.7	58.3	56.1	55.3	54.7	53.9	53.0	52.4	51.7	50.6	50.0	48.6	47.8	46.4
270.0	59.1	60.3	58.9	57.2	55.4	54.5	54.0	53.1	52.4	51.6	50.9	49.7	48.2	47.1	46.3	44.5
292.5	59.5	60.2	59.3	57.4	56.6	55.1	54.3	53.5	52.2	51.4	50.8	50.1	48.8	46.9	45.4	44.2
315.0		60.5	61.4	60.7	58.8	56.9	55.8	55.2	54.4	53.7	53.0	51.7	50.0	48.7	47.6	46.5
337.5		62.7	63.9	63.3	60.2	59.4	58.8	58.0	57.7	56.8	55.9	54.7	53.2	52.0	50.8	49.6

Interior Levels (dBA): Windows-open 53.4 closed 51.5 Idle

open ______ closed ______ 1800

AMBIENT LEVEL (dBA) Windows-open 44.6 closed 35.5

FY73 Emission Factor Testing Program
Sound Level Testing
Decibel Contour Data Sheet

Vehicle Data

No. 001 Year 1969 Make Toyo Model Coro

Normal Idle ____________ 1800 rpm Idle ✓ Site S.A.

Sound Level Readings (dBA)

AMB 43.6

Distance from Center of Vehicle (feet)

Radius Line (Degs)	6	9	12	15	18	21	24	27	30	33	36	48	60	72	84	96
0.0		77.3	75.4	72.5	70.8	69.9	68.1	66.6	65.2	64.3	63.2	62.4	60.3	58.7	56.2	54.1
22.5		71.3	75.2	72.6	69.9	67.6	65.0	64.0	63.4	62.7	61.9	60.0	59.1	57.8	56.3	55.0
45.0		71.8	71.1	70.3	67.9	65.8	65.2	64.7	64.2	63.1	62.7	60.6	59.3	58.0	56.7	55.4
67.5	69.3	70.8	69.2	67.6	66.4	65.3	64.2	63.3	62.7	62.1	61.3	59.7	58.5	57.4	56.9	55.4
90.0	69.9	71.1	69.0	67.7	65.4	64.2	63.1	62.3	61.4	60.5	59.8	57.3	56.4	55.1	54.5	53.2
112.5	70.6	71.2	68.8	67.0	66.3	64.9	63.4	62.7	62.1	61.6	60.8	59.9	59.1	58.3	57.1	55.9
135.0		68.5	67.7	67.1	66.3	65.2	64.1	63.6	62.5	61.7	60.5	59.2	57.8	56.3	54.7	53.8
157.5		66.5	67.1	66.3	65.4	64.4	63.6	62.5	61.7	60.9	60.0	58.4	57.1	55.8	54.4	53.1
180.0		64.4	66.3	66.1	65.4	64.2	63.0	62.2	61.2	60.7	60.1	58.5	57.4	56.0	54.9	53.2
202.5		65.3	66.1	66.3	66.5	65.0	63.8	63.0	62.3	61.6	61.2	59.7	58.4	57.3	56.1	54.7
225.0		69.1	70.2	68.7	67.3	66.1	65.2	64.3	63.1	62.7	62.0	60.4	58.7	57.4	56.0	54.1
247.5	69.2	71.5	70.6	69.6	67.8	66.4	65.2	64.2	63.5	62.9	62.0	60.6	59.3	58.1	57.1	55.8
270.0	68.7	71.4	70.5	68.2	66.3	64.6	63.2	62.4	61.7	60.9	60.0	58.7	57.1	55.9	54.2	53.1
292.5	70.1	71.5	70.8	69.9	67.9	66.6	65.3	64.4	63.2	62.6	61.9	60.3	58.7	57.2	55.9	54.4
315.0		72.7	74.1	72.3	70.8	68.4	66.7	64.8	63.5	62.9	62.1	61.0	59.9	57.6	55.9	53.9
337.5		75.1	75.4	73.0	71.0	69.7	67.8	66.3	65.2	63.9	63.3	62.7	61.9	60.8	57.3	57.9

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

Interior Levels (dBA):	Windows-open	☐	closed	☐	Idle
	open	64.3	closed	63.2	1800
AMBIENT LEVEL (dBA)	Windows-open	44.6	closed	35.5	

FY73 Emission Factor Testing Program
Sound Level Testing
Decibel Contour Data Sheet

Vehicle Data

No. 004 Year 1974 Make Chev Model CAMA

Normal Idle 475 D 1800 rpm Idle ______ Site S.A.

Sound Level Readings (dBA)

AMB 49.7

Radius Line (Degs)	6	9	12	15	18	21	24	27	30	33	36	48	60	72	84	96
	Distance from Center of Vehicle (feet)															
0.0		64.0	63.7	62.5	60.6	59.7	58.0	57.5	57.0	56.4	56.0	55.0	53.3	53.3	53.3	53.3
22.5			63.0	63.9	62.5	60.7	59.9	58.2	57.4	56.3	55.8	54.3	52.3	52.1	51.5	49.9
45.0	62.4	63.6	62.7	60.9	59.8	57.9	57.0	56.2	54.9	54.3	53.3	52.9	51.5	50.5	50.0	49.4
67.5	62.3	63.7	62.0	60.0	58.3	57.8	56.9	55.5	55.0	54.2	53.4	52.6	52.8	50.6	49.9	49.9
90.0	62.5	62.3	61.0	59.8	57.5	56.0	55.1	54.6	54.1	53.8	53.4	52.0	50.5	49.9	49.5	49.5
112.5	62.1	61.0	59.9	59.2	58.0	56.7	55.0	54.5	54.2	53.8	52.5	52.5	51.6	51.0	50.6	49.5
135.0	61.6	61.2	60.0	59.3	58.0	57.4	57.7	56.3	55.5	54.9	54.3	53.4	52.9	51.2	50.6	49.8
157.5	62.3	61.4	60.2	58.7	56.9	55.6	54.8	54.2	53.6	53.2	52.4	51.6	57.2	50.9	49.9	49.5
180.0		62.1	60.9	59.3	57.7	56.8	55.0	54.2	53.4	52.7	52.2	51.4	51.0	50.8	49.7	49.3
202.5		59.8	60.7	60.6	59.5	58.2	57.6	56.4	55.5	54.7	54.0	52.0	51.6	51.3	50.2	49.8
225.0	62.4	61.5	60.7	59.7	58.2	57.3	56.3	55.6	55.0	54.6	54.0	53.8	53.3	52.4	51.7	50.0
247.5	62.4	61.2	60.0	58.5	57.6	56.3	55.2	59.3	53.8	53.3	52.9	51.6	50.8	50.3	49.9	49.6
270.0	62.4	61.5	60.7	59.4	58.1	56.9	56.3	55.2	54.4	54.0	53.6	52.3	51.6	50.9	50.2	49.7
292.5	62.3	61.9	60.4	58.7	57.8	57.0	56.5	55.6	55.3	55.0	54.5	53.2	52.7	52.4	51.1	49.9
315.0	62.8	62.5	61.8	60.0	59.3	58.5	57.0	56.2	55.3	54.5	53.8	53.4	52.6	52.0	50.8	49.8
337.5	63.0	62.4	60.6	59.2	58.3	57.7	56.7	55.8	55.1	54.6	53.0	52.7	52.1	51.5	50.6	50.0

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

Interior Levels (dBA):	Windows-open	54.1	closed	52.2	Idle
	open		closed		1800
AMBIENT LEVEL (dBA)	Windows-open	44.0	closed	32.0	

FY73 Emission Factor Testing Program
Sound Level Testing
Decibel Contour Data Sheet

Vehicle Data

No. 004 Year 1974 Make Chev Model Cama

Normal Idle ______ 1800 rpm Idle ✓ Site S.A.

Sound Level Readings (dBA)

AMB 43.8

Distance from Center of Vehicle (feet)

Radius Line (Degs)	6	9	12	15	18	21	24	27	30	33	36	48	60	72	84	96
0.0			83.0	82.9	81.4	78.7	76.6	74.3	73.5	72.0	71.2	68.8	66.3	65.1	63.0	61.7
22.5	74.8	75.0	74.5	73.2	71.9	70.7	69.1	68.3	66.8	65.8	65.0	62.4	60.5	57.9	56.7	55.8
45.0	74.5	73.3	71.2	69.6	68.7	67.5	66.0	64.9	64.0	63.4	62.7	60.9	58.4	56.8	56.0	55.1
67.5	72.3	71.4	70.0	68.2	66.7	65.1	64.3	63.7	62.9	62.0	61.1	60.5	57.7	56.8	54.4	54.7
90.0	72.0	70.5	69.8	68.7	66.7	66.0	64.9	64.3	63.2	62.6	62.2	60.7	57.3	58.2	55.8	54.1
112.5	69.8	70.1	69.9	67.8	66.4	64.9	63.8	63.4	62.6	62.0	61.5	60.7	58.3	56.9	55.2	54.6
135.0	72.7	71.6	70.2	68.3	67.0	65.0	64.6	64.2	62.9	62.4	62.0	59.3	58.0	56.6	55.6	54.9
157.5		72.4	71.0	68.7	66.5	64.8	63.6	63.0	62.1	60.9	60.1	59.2	56.9	54.0	52.7	57.3
180.0		71.2	70.7	69.8	67.9	66.5	65.1	64.0	63.4	62.4	61.0	57.3	55.4	54.2	52.9	51.5
202.5		68.9	69.7	70.0	69.3	68.2	66.8	65.7	64.3	63.2	62.6	60.9	57.4	54.4	54.0	53.2
225.0	70.1	68.7	67.3	66.4	65.3	64.6	63.4	62.5	61.6	60.6	60.1	59.0	57.3	56.2	54.7	53.0
247.5	71.1	69.3	68.4	67.2	65.4	64.5	63.2	62.0	61.1	60.7	60.1	58.0	56.8	54.7	53.3	52.3
270.0	70.2	69.7	68.5	67.1	66.2	64.7	64.0	62.9	62.2	61.6	61.4	59.5	58.7	56.8	55.5	53.9
292.5	71.6	70.2	69.3	68.0	67.1	66.3	64.9	63.4	62.5	61.3	60.6	58.1	56.8	55.7	54.2	53.0
315.0	71.6	70.4	70.0	69.3	67.8	66.7	65.4	64.6	63.2	62.5	62.0	60.0	58.0	57.1	56.3	54.5
337.5		72.0	72.3	70.9	69.2	68.0	66.6	66.1	65.3	64.7	64.1	60.3	58.8	57.8	56.7	55.3

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

Interior Levels (dBA): Windows-open ☐ closed ☐ Idle

open 60.5 closed 57.3 1800

AMBIENT LEVEL (dBA) Windows-open 37.4 closed 31.5

FY73 Emission Factor Testing Program
Sound Level Testing
Decibel Contour Data Sheet

Vehicle Data

No. 005 Year 1972 Make Olds Model Crui

Normal Idle 460 D 1800 rpm Idle ______ Site CS. A.

Sound Level Readings (dBA)

AMB 48.5

Distance from Center of Vehicle (feet)

Radius Line (Degs)	6	9	12	15	18	21	24	27	30	33	36	48	60	72	84	96
0.0			61.3	61.5	59.9	58.1	57.2	55.7	55.1	54.6	53.4	52.2	51.3	50.8	50.3	49.5
22.5	58.1	59.7	59.4	59.1	58.5	57.7	56.7	55.0	54.5	53.3	52.0	50.9	50.5	50.0	49.6	49.3
45.0	57.9	58.6	57.7	56.7	56.3	55.5	54.8	54.2	53.6	53.0	52.0	51.7	51.0	50.6	50.1	49.9
67.5	59.4	58.7	58.0	57.4	56.1	55.7	55.2	54.6	54.0	53.5	53.1	52.5	51.3	50.4	50.0	49.7
90.0	58.5	57.8	56.4	55.2	54.0	53.4	52.6	52.2	51.9	50.4	50.0	49.2	49.0	48.7	48.5	48.2
112.5	58.3	57.8	56.4	55.9	54.8	53.3	52.9	52.0	51.2	50.9	50.6	50.1	49.9	49.4	49.3	49.3
135.0	58.3	57.5	56.3	55.6	54.5	54.2	53.8	53.5	53.0	52.6	52.0	51.5	50.8	50.2	50.0	49.7
157.5	57.3	57.5	58.7	57.6	58.1	57.4	56.6	55.7	55.0	54.3	53.6	52.1	51.4	51.0	50.7	50.0
180.0	62.3	60.7	61.6	60.0	59.2	57.0	56.3	55.2	54.7	53.4	53.0	52.3	51.6	51.0	51.4	50.3
202.5	62.7	62.3	63.7	62.3	60.4	58.5	57.4	56.7	55.2	54.6	54.1	53.1	51.3	50.7	50.1	49.9
225.0	61.5	61.0	62.3	61.8	60.2	59.7	58.3	57.2	56.1	55.5	54.6	53.0	52.4	51.3	50.8	50.3
247.5	60.5	59.4	59.9	59.5	58.3	58.5	57.4	56.3	55.7	55.0	54.4	53.1	52.4	51.1	50.4	49.9
270.0	61.3	61.0	59.1	57.9	56.8	56.2	55.5	54.9	54.3	53.5	53.0	52.5	51.9	50.6	50.2	49.8
292.5	60.4	59.8	58.3	57.1	56.4	55.0	54.3	53.5	52.9	52.2	51.4	51.0	50.9	50.2		
315.0	60.4	60.9	60.2	58.7	57.9	56.5	56.1	56.3	55.7	54.2	53.4	52.8	52.1	51.6	51.0	50.3
337.5			60.0	58.4	57.6	56.8	55.3	54.4	53.2	52.5	51.8	51.2	50.6	50.4	50.0	49.7

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

Interior Levels (dBA): Windows-open 51.8 closed 48.3 Idle

open ______ closed ______ 1800

AMBIENT LEVEL (dBA) Windows-open 37.5 closed 31.1

FY73 Emission Factor Testing Program
Sound Level Testing
Decibel Contour Data Sheet

Vehicle Data

No. 005 Year 1972 Make Olds Model Crui

Normal Idle ______ 1800 rpm Idle ✓ Site O.S.A.

Sound Level Readings (dBA)

AMB 43.6

Distance from Center of Vehicle (feet)

Radius Line (Degs)	6	9	12	15	18	21	24	27	30	33	36	48	60	72	84	96
0.0		74.3	71.2	69.4	68.0	67.2	66.3	65.6	64.2	63.8	63.4	62.8	61.5	60.3	59.7	58.6
22.5	74.0	74.3	72.6	71.5	71.0	70.3	70.0	69.4	68.9	68.1	67.3	66.1	64.9	62.2	61.3	59.6
45.0	69.5	70.1	69.7	69.2	68.4	68.0	67.8	67.4	66.9	66.2	65.7	64.9	63.8	63.1	66.4	60.1
67.5	67.8	68.3	67.8	67.3	66.7	66.1	64.3	63.7	63.1	62.8	62.1	60.1	58.3	56.4	54.9	54.3
90.0	70.8	69.9	68.5	67.7	66.3	65.0	64.1	63.4	62.8	62.3	61.7	60.2	58.9	57.6	56.6	55.7
112.5	69.6	68.9	68.1	67.7	67.0	66.3	66.0	65.6	65.1	64.7	64.1	61.7	60.5	59.7	58.2	56.6
135.0	69.8	69.4	68.7	68.0	67.2	66.4	65.9	65.3	64.7	64.0	63.2	62.2	61.8	59.7	57.9	56.1
157.5		69.4	68.5	67.3	66.7	66.0	65.6	64.1	63.6	63.0	62.2	60.7	59.9	59.0	58.1	56.9
180.0		69.6	67.8	65.8	64.6	63.5	62.7	62.1	60.5	59.4	58.7	58.0	57.1	56.4	55.2	54.7
202.5		70.1	70.4	69.8	69.4	68.7	68.1	66.9	66.4	66.0	65.7	63.9	62.1	61.4	60.6	58.2
225.0	70.8	69.7	69.1	68.4	68.0	67.7	66.8	66.3	65.7	65.1	64.9	62.7	61.4	60.7	59.9	58.7
247.5	69.6	69.7	68.3	67.0	66.7	65.3	65.0	64.8	64.1	63.8	63.3	61.4	60.8	60.0	58.2	57.6
270.0	70.6	70.1	69.7	67.8	66.3	65.9	64.2	63.8	63.0	61.7	61.0	60.2	58.4	56.9	56.0	55.3
292.5	68.9	68.6	68.0	67.4	66.4	65.2	64.8	63.3	62.1	61.4	60.2	58.4	57.8	57.1	56.4	55.8
315.0	69.2	68.4	67.9	67.5	67.1	66.5	65.2	64.0	63.9	63.2	62.8	61.3	57.9	59.2	58.2	57.1
337.5		73.2	72.1	71.6	70.4	69.9	69.3	68.2	68.0	67.4	67.0	65.8	63.6	61.1	59.8	59.0

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

Interior Levels (dBA): Windows-open ☐ closed ☐ Idle

open 58.6 closed 57.3 1800

AMBIENT LEVEL (dBA) Windows-open 37.4 closed 31.4

FY73 Emission Factor Testing Program
Sound Level Testing
Decibel Contour Data Sheet

Vehicle Data

No. 013 Year 1973 Make Merc Model Brou

Normal Idle 560 1800 rpm Idle ______ Site S.A.

Sound Level Readings (dBA)

AMB 43.7

Distance from Center of Vehicle (feet)

Radius Line (Degs)	6	9	12	15	18	21	24	27	30	33	36	48	60	72	84	96
0.0		70.9	70.3	65.6	63.5	62.1	61.3	58.6	57.7	56.8	55.3	54.2	52.2	50.8	49.1	49.2
22.5		67.3	66.4	65.9	64.2	62.9	61.3	60.1	58.7	58.2	57.7	55.0	52.6	51.4	50.4	48.9
45.0		62.4	61.9	61.2	60.5	59.3	58.4	57.3	56.8	55.9	55.0	54.3	52.6	51.1	48.5	47.6
67.5	62.4	61.3	60.7	60.0	59.4	58.6	57.5	56.7	55.7	55.0	53.8	52.9	51.6	50.9	49.4	48.3
90.0	61.5	60.9	60.1	58.9	57.6	56.6	56.2	55.4	54.4	53.2	52.7	51.3	50.2	49.4	48.2	47.7
112.5	62.1	61.3	60.6	59.9	58.4	57.8	57.0	56.3	55.1	54.4	53.7	52.4	51.2	49.7	48.1	47.3
135.0		62.4	61.4	60.2	58.1	57.3	56.1	55.4	54.6	53.5	52.9	51.1	50.0	49.2	47.8	46.7
157.5		60.4	59.6	58.5	57.5	54.6	53.7	52.9	52.0	51.3	50.8	48.6	47.7	46.3	44.9	43.7
180.0		59.9	60.4	60.1	58.6	57.4	56.9	56.0	54.5	52.9	52.1	51.6	50.2	49.5	47.6	46.8
202.5		61.4	60.6	59.8	59.2	58.5	57.7	56.9	56.0	55.3	54.7	52.2	51.1	48.9	47.7	45.6
225.0		62.9	63.1	62.0	61.6	60.3	58.9	57.4	56.7	56.0	55.3	54.1	52.4	51.7	50.5	48.8
247.5	62.6	61.8	60.8	59.7	59.0	58.6	57.6	56.4	55.3	54.2	53.8	51.3	50.0	48.4	46.9	44.7
270.0	61.8	61.5	61.6	60.4	58.9	57.4	56.7	56.1	54.3	53.5	53.2	52.4	51.6	50.1	48.9	48.0
292.5	61.4	60.3	59.2	58.3	57.8	56.9	56.3	55.8	55.2	54.5	53.9	51.6	49.9	48.7	46.9	45.4
315.0		59.8	60.0	59.7	58.9	58.1	57.3	56.4	55.6	54.5	54.0	52.0	50.4	48.3	46.9	45.3
337.5		60.3	59.1	58.7	57.2	56.6	56.1	55.5	54.9	53.3	52.8	51.0	49.3	47.4	45.2	43.4

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

Interior Levels (dBA): Windows-open 51.3 closed 49.4 Idle

open ______ closed ______ 1800

AMBIENT LEVEL (dBA) Windows-open 39.3 closed 33.2

FY73 Emission Factor Testing Program
Sound Level Testing
Decibel Contour Data Sheet

Vehicle Data

No. 013 Year 1973 Make Merc Model Brou

Normal Idle ______ 1800 rpm Idle ✓ Site CS.A.

Sound Level Readings (dBA)

AMB 43.7

Distance from Center of Vehicle (feet)

Radius Line (Degs)	6	9	12	15	18	21	24	27	30	33	36	48	60	72	84	96
0.0		76.3	75.7	74.5	73.7	72.9	71.8	71.0	70.3	69.4	68.7	66.5	64.7	62.8	61.3	57.8
22.5		74.1	73.6	72.8	72.0	71.1	70.4	69.6	68.9	68.2	67.4	65.6	64.7	63.9	62.7	61.9
45.0		70.5	69.9	69.0	68.1	67.2	66.4	65.7	63.2	62.8	61.4	59.7	58.7	56.8	55.7	54.6
67.5	67.9	69.7	69.1	68.3	67.6	66.7	65.7	64.9	64.0	63.3	62.1	61.6	60.0	58.1	56.8	55.4
90.0	67.5	68.2	67.3	66.6	65.9	65.0	64.4	63.8	63.1	62.3	61.6	59.8	58.4	56.8	55.8	54.3
112.5	65.9	66.5	66.0	65.3	64.7	64.1	63.5	62.8	62.1	61.4	60.6	58.9	57.8	56.3	55.1	54.0
135.0		67.4	65.9	63.9	63.0	62.3	61.1	60.7	58.6	57.3	55.5	54.3	52.8	52.0	49.8	47.9
157.5		68.3	67.2	66.7	65.4	64.7	64.1	63.4	62.9	62.1	61.4	59.8	58.7	57.4	56.3	54.8
180.0		68.5	68.9	68.2	67.5	66.9	66.3	65.7	65.1	64.7	63.1	61.7	59.4	57.9	56.4	54.6
202.5		68.7	68.7	68.1	67.6	67.0	66.2	65.6	65.0	63.8	62.9	61.7	59.8	58.6	57.2	56.0
225.0		68.7	67.6	66.8	66.3	65.8	64.3	63.1	62.4	61.8	61.2	58.5	56.3	54.7	53.9	51.5
247.5	65.1	67.7	66.7	65.3	64.7	63.8	63.4	62.7	62.1	61.3	60.9	58.9	57.9	56.3	54.6	52.2
270.0	64.3	66.3	64.9	64.0	63.3	62.6	62.1	61.3	60.7	59.8	59.0	57.5	56.4	54.5	53.0	51.3
292.5	65.2	67.2	66.5	65.8	65.3	64.7	64.1	63.4	62.7	61.7	60.5	59.8	58.9	57.6	56.1	54.2
315.0		68.1	69.1	68.6	67.8	67.2	66.5	66.0	65.4	64.7	63.7	61.9	59.7	58.6	57.3	56.1
337.5		69.8	70.3	69.4	68.7	68.1	67.3	66.6	65.8	64.9	64.0	62.3	61.0	59.2	57.9	55.4

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

Interior Levels (dBA): Windows-open ☐ closed ☐ Idle

open 55.4 closed 53.9 1800

AMBIENT LEVEL (dBA) Windows-open 39.3 closed 33.2

FY73 Emission Factor Testing Program
Sound Level Testing
Decibel Contour Data Sheet

Vehicle Data

No. 015 Year 1972 Make Dats Model 510

Normal Idle 800 1800 rpm Idle ______ Site S. B.

Sound Level Readings (dBA)

AMB 45.4

Distance from Center of Vehicle (feet)

Radius Line (Degs)	6	9	12	15	18	21	24	27	30	33	36	48	60	72	84	96
0.0		60.3	58.7	57.6	56.7	55.2	54.3	53.8	53.5	53.2	52.7	52.4	51.6	49.8	49.0	47.5
22.5		62.6	63.0	60.8	58.7	56.5	55.3	54.2	52.7	52.0	51.3	50.5	49.8	49.1	48.7	47.9
45.0		60.8	61.0	58.3	56.7	54.6	53.5	52.9	52.4	52.2	51.8	51.2	50.3	49.7	49.1	48.3
67.5	60.1	61.0	59.8	57.4	56.6	55.0	54.4	53.9	53.4	52.7	51.6	51.1	50.5	49.8	49.0	48.5
90.0	60.6	62.1	61.1	58.4	56.5	55.3	54.2	53.5	52.7	51.9	51.1	50.7	49.9	49.0	48.7	48.1
112.5	61.2	62.8	60.5	58.3	56.9	55.6	55.0	54.3	53.3	52.4	52.1	51.4	50.7	49.9	49.0	48.3
135.0		59.6	59.1	57.4	56.6	55.2	54.3	53.4	52.7	52.2	51.5	50.8	49.8	49.3	48.7	47.9
157.5		58.2	59.0	58.1	57.4	56.8	55.2	54.9	53.5	52.8	52.0	51.1	50.1	49.4	48.6	47.9
180.0		58.3	58.1	56.8	55.4	54.6	54.0	53.3	52.7	52.1	51.4	50.7	49.7	49.1	48.3	47.7
202.5		57.3	57.8	57.4	57.0	56.2	55.6	54.9	54.2	53.7	53.4	52.6	52.0	51.3	50.1	49.2
225.0		60.6	61.1	60.2	58.3	57.4	56.4	55.5	55.0	54.2	54.1	53.5	53.0	51.9	50.2	49.1
247.5	61.6	63.2	62.5	60.3	58.5	57.7	56.4	55.2	54.0	53.6	52.9	52.2	51.4	50.6	49.5	48.8
270.0	61.1	64.3	62.7	60.3	58.2	57.0	56.1	54.9	54.3	53.6	53.0	52.6	51.8	51.3	48.9	48.0
292.5	61.9	64.1	62.5	60.1	58.4	57.0	56.2	55.3	54.9	54.0	53.4	52.8	51.3	50.7	50.1	49.3
315.0		64.4	65.3	64.5	62.0	60.0	57.8	56.5	55.3	54.7	54.3	53.9	53.0	51.1	49.6	48.7
337.5		66.4	67.3	64.5	62.0	59.9	58.3	57.1	55.9	55.4	54.4	53.7	52.1	51.3	49.8	48.7

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

Interior Levels (dBA): Windows-open 55.3 closed 58.2 Idle

open ___ closed ___ 1800

AMBIENT LEVEL (dBA) Windows-open 40.9 closed 38.8

FY73 Emission Factor Testing Program
Sound Level Testing
Decibel Contour Data Sheet

Vehicle Data

No. 015 Year 1972 Make Dats Model 510

Normal Idle ____________ 1800 rpm Idle ✓ Site S.A.

Sound Level Readings (dBA)

AMB 45.4

Distance from Center of Vehicle (feet)

Radius Line (Degs)	6	9	12	15	18	21	24	27	30	33	36	48	60	72	84	96
0.0		71.1	68.4	66.7	65.2	63.4	61.7	60.5	59.8	58.9	57.5	55.4	54.3	53.5	52.6	51.0
22.5		68.4	68.1	65.7	62.4	60.1	59.2	57.7	56.8	55.6	551	54.5	53.2	51.4	50.6	49.3
45.0		66.7	66.0	64.3	61.5	59.4	58.4	57.3	57.1	56.4	55.9	55.2	54.0	52.7	51.8	50.2
67.5	65.1	64.4	62.3	60.2	59.0	58.1	56.3	55.4	54.9	54.1	538	530	51.8	50.1	49.3	48.6
90.0	63.2	64.3	62.3	60.0	57.9	56.4	55.2	54.5	53.6	52.8	52.1	51.6	49.9	48.2	47.4	46.8
112.5	63.1	63.9	62.4	62.1	58.5	57.8	56.3	55.2	54.7	53.8	53.0	52.3	51.6	50.9	50.2	49.3
135.0		60.7	61.3	58.9	57.7	57.0	56.3	55.4	54.0	53.4	52.6	51.9	51.4	49.7	48.2	47.7
157.5		57.6	57.3	58.5	58.0	57.1	55.9	54.7	54.1	53.4	52.8	52.1	51.0	49.3	48.5	47.9
180.0		57.9	58.3	58.0	57.1	55.9	55.0	54.6	53.4	52.8	52.0	51.1	50.9	50.2	49.4	48.7
202.5		58.3	59.8	59.2	57.9	57.3	56.4	55.1	54.8	54.1	53.7	53.0	52.4	51.3	50.5	49.6
225.0		60.7	62.2	60.8	59.2	57.7	57.0	55.9	54.9	54.1	53.7	53.1	52.0	51.7	51.1	50.0
247.5	62.4	64.1	63.0	61.2	59.3	58.4	57.1	56.8	55.8	54.9	54.1	53.4	52.4	51.6	50.4	49.3
270.0	63.2	65.4	63.5	60.9	58.4	57.8	56.5	56.0	55.5	54.8	53.7	53.1	52.4	51.7	50.8	49.6
292.5	63.4	64.7	63.3	61.9	60.2	59.0	58.1	57.3	56.4	55.4	54.9	52.9	52.2	51.6	51.0	50.0
315.0		67.8	67.5	64.7	62.3	61.3	59.9	58.4	57.2	56.1	55.4	53.1	51.9	51.1	50.8	50.3
337.5		69.8	69.3	67.2	65.1	62.5	60.9	59.2	57.8	56.9	55.5	54.0	53.4	52.9	52.0	51.6

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

Interior Levels (dBA): Windows-open ☐ closed ☐ Idle

open 59.7 closed 63.5 1800

AMBIENT LEVEL (dBA) Windows-open 40.9 closed 38.8

FY73 Emission Factor Testing Program
Sound Level Testing
Decibel Contour Data Sheet

Vehicle Data

No. 016 Year 1971 Make Chev Model King

Normal Idle 700 1800 rpm Idle ______ Site S. A.

Sound Level Readings (dBA)

AMB 46.0

Distance from Center of Vehicle (feet)

Radius Line (Degs)	6	9	12	15	18	21	24	27	30	33	36	48	60	72	84	96
0.0		64.2	62.9	61.3	59.8	58.3	57.2	56.0	55.2	54.6	53.9	52.8	52.0	51.3	50.2	49.9
22.5		62.0	61.4	59.3	57.8	56.2	55.1	54.3	53.0	52.5	51.9	50.2	49.6	48.8	48.1	47.6
45.0		60.6	61.0	58.7	57.3	56.2	54.5	53.9	52.6	52.1	51.5	50.3	49.4	48.4	47.6	47.2
67.5	58.3	60.6	58.2	57.1	56.4	55.3	54.2	53.3	52.6	52.1	51.4	50.6	50.0	49.3	48.4	47.8
90.0	57.5	59.8	58.0	56.4	55.0	54.4	53.7	53.1	52.5	52.0	51.2	50.2	49.3	48.6	47.9	47.2
112.5	57.3	58.1	57.8	56.7	56.0	55.4	54.6	54.1	53.9	52.8	51.7	50.4	49.6	48.8	48.0	47.2
135.0		59.1	58.7	57.9	57.0	55.8	55.1	54.3	52.9	52.0	51.4	50.0	49.1	48.3	47.6	47.0
157.5		60.6	61.0	58.2	56.9	56.0	55.1	54.3	53.5	52.2	51.7	50.3	49.5	48.8	48.1	47.3
180.0		60.4	60.7	59.1	57.4	56.3	55.5	54.6	53.8	53.1	52.3	51.6	50.7	49.2	48.6	47.7
202.5		63.5	62.4	600	59.0	57.7	56.4	55.9	55.1	54.3	53.8	52.5	51.7	50.9	50.0	49.1
225.0		68.3	64.9	610	59.8	58.4	57.6	56.8	55.3	54.7	54.0	52.7	52.1	51.0	49.8	49.0
247.5	61.2	65.4	62.5	60.3	59.6	58.4	57.4	56.3	55.4	54.2	53.7	52.9	52.0	51.3	49.7	48.9
270.0	60.6	61.5	60.3	59.7	58.4	57.5	56.9	56.2	55.3	54.7	54.1	53.4	52.6	51.9	51.0	49.9
292.5	60.9	62.0	60.3	59.5	58.1	57.4	56.3	55.4	54.2	53.5	53.0	52.1	51.3	50.6	49.8	49.2
315.0		61.4	61.7	60.9	59.2	57.9	57.0	55.9	54.4	53.8	53.1	52.1	51.4	50.6	49.9	49.1
337.5		62.2	63.5	61.0	58.4	57.8	56.3	55.1	54.3	52.3	51.7	50.9	50.0	49.2	48.2	47.7

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

Interior Levels (dBA): Windows-open 52.4 closed 50.3 Idle

open ☐ closed ☐ 1800

AMBIENT LEVEL (dBA) Windows-open 34.9 closed 29.3

FY73 Emission Factor Testing Program
Sound Level Testing
Decibel Contour Data Sheet

Vehicle Data

No. 016 Year 1971 Make CHEV Model KING

Normal Idle ______ 1800 rpm Idle ✓ Site S.A.

Sound Level Readings (dBA)

AMB 46.0

Distance from Center of Vehicle (feet)

Radius Line (Degs)	6	9	12	15	18	21	24	27	30	33	36	48	60	72	84	96
0.0		80.2	79.3	76.7	74.5	72.6	71.9	71.1	70.0	69.4	68.7	66.9	65.7	64.1	62.3	60.2
22.5		79.2	77.7	73.6	71.9	70.1	69.2	68.3	67.1	66.4	65.0	64.2	63.6	63.0	62.2	61.0
45.0		75.3	75.0	73.5	71.1	70.0	68.9	68.2	67.3	66.2	65.6	64.9	63.8	63.0	62.1	61.3
67.5	69.7	74.4	73.0	70.9	70.1	69.2	68.3	67.2	66.4	65.7	64.8	63.9	63.1	62.4	61.2	60.0
90.0	71.6	73.5	72.3	71.0	70.3	67.9	67.2	66.3	65.4	64.6	64.1	63.2	62.1	61.1	60.2	59.6
112.5	70.4	72.1	72.4	70.3	69.8	68.7	67.6	66.3	65.4	64.3	63.8	62.9	62.2	61.3	60.0	59.1
135.0		67.4	67.9	67.6	67.2	66.8	65.5	64.9	64.0	63.4	62.7	61.9	60.8	59.9	59.0	58.2
157.5		68.7	69.3	67.2	66.0	65.3	64.1	63.2	62.6	62.0	61.4	60.7	59.8	59.0	58.7	57.5
180.0		68.8	69.2	67.5	66.1	65.4	64.4	63.7	63.1	62.3	61.8	61.0	60.0	59.3	57.9	57.3
202.5		71.2	70.1	68.4	67.1	66.5	65.3	64.2	63.6	62.9	62.3	61.6	61.0	60.1	59.3	58.1
225.0		74.1	74.3	71.7	69.9	69.2	68.4	67.5	66.7	66.1	65.4	64.2	63.1	62.0	59.9	59.0
247.5	71.3	75.2	73.3	71.4	70.6	69.8	68.7	67.3	66.5	65.9	65.0	64.1	63.1	62.2	59.9	59.3
270.0	71.5	74.2	73.8	72.2	70.9	68.9	67.7	67.0	66.4	65.5	64.3	63.5	62.4	61.2	60.3	59.5
292.5	71.8	75.3	74.1	73.2	72.1	70.8	69.7	68.2	67.4	66.3	65.5	64.8	63.7	63.0	61.9	60.9
315.0		75.3	76.4	74.5	73.1	70.9	69.6	68.2	67.0	66.3	65.7	65.0	64.1	63.2	62.4	61.2
337.5		77.7	78.6	75.9	74.0	72.5	70.9	69.7	68.3	67.5	66.7	65.8	64.9	64.1	63.2	61.7

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

Interior Levels (dBA):	Windows-open		closed		Idle
	open	62.0	closed	60.3	1800
AMBIENT LEVEL (dBA)	Windows-open	34.9	closed	29.3	

FY73 Emission Factor Testing Program
Sound Level Testing
Decibel Contour Data Sheet

Vehicle Data

No. 019 Year 1969 Make VOLK Model SEDA

Normal Idle 800 1800 rpm Idle ______ Site S.A.

Sound Level Readings (dBA)

AMB 43.7

Distance from Center of Vehicle (feet)

Radius Line (Degs)	6	9	12	15	18	21	24	27	30	33	36	48	60	72	84	96
0.0		61.4	60.0	58.7	58.3	56.9	56.4	55.5	55.1	54.1	53.4	52.0	50.3	48.1		
22.5		61.1	60.3	59.4	58.6	57.8	57.1	56.3	55.4	54.5	53.6	51.8	49.9	48.7		
45.0		60.7	60.0	59.4	58.8	57.8	57.3	56.5	55.4	54.7	53.5	52.1	51.3	49.2	48.0	
67.5	62.3	61.1	60.4	59.7	59.0	58.5	57.8	56.3	55.7	54.9	53.8	53.0	54.2	51.3	50.7	49.4
90.0	63.2	62.0	61.3	60.7	60.0	59.2	58.4	57.1	56.3	55.6	54.1	52.3	50.9	49.2	48.2	
112.5	63.7	64.3	63.4	62.4	61.1	60.4	59.1	58.6	57.5	56.8	54.7	53.2	52.1	49.9	48.1	
135.0		66.7	65.8	64.9	64.0	63.2	62.4	61.1	60.3	59.4	58.2	56.7	55.4	53.9	51.6	49.6
157.5		68.2	67.1	66.3	65.1	64.3	62.5	60.3	59.4	58.7	56.4	54.8	53.6	52.1	51.5	49.2
180.0		71.8	71.5	70.4	68.0	66.5	64.3	61.9	61.4	59.7	58.5	57.2	56.4	55.3	53.1	51.9
202.5		70.3	69.6	69.0	67.8	65.4	64.1	62.0	60.3	58.1	57.3	56.4	54.8	53.2	51.8	48.3
225.0		70.4	69.3	68.4	66.6	65.2	63.4	62.4	61.1	59.3	57.8	56.1	54.4	52.7	50.3	48.9
247.5	66.9	67.2	66.7	65.9	64.9	63.5	61.7	60.3	59.8	57.9	55.3	54.1	52.8	50.5	48.7	
270.0	66.1	65.3	64.6	64.1	62.9	61.7	61.0	59.4	58.5	57.9	56.3	55.0	53.4	51.1	49.7	47.9
292.5		62.3	61.8	60.9	59.0	58.1	56.3	54.7	53.2	51.7	49.9	47.8				
315.0		61.5	60.8	59.1	57.8	56.3	55.4	53.1	52.4	51.4	49.7	47.7				
337.5		60.8	59.1	58.4	57.1	55.9	54.7	53.1	51.7	50.9	49.1	47.3				

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

Interior Levels (dBA): Windows-open 57.9 closed 56.0 Idle

open ______ closed ______ 1800

AMBIENT LEVEL (dBA) Windows-open 39.5 closed 32.3

FY73 Emission Factor Testing Program
Sound Level Testing
Decibel Contour Data Sheet

Vehicle Data

No. 019 Year 1969 Make VOLK Model SEDA

Normal Idle ______ 1800 rpm Idle ✓ Site S.A.

Sound Level Readings (dBA)

AMB 43.7

Distance from Center of Vehicle (feet)

Radius Line (Degs)	6	9	12	15	18	21	24	27	30	33	36	48	60	72	84	96
0.0		66.5	66.2	65.7	64.5	63.9	62.8	61.9	61.0	60.2	59.3	57.4	54.9	53.4	51.8	49.6
22.5		65.0	65.7	64.9	64.3	63.4	62.7	61.5	60.1	58.7	56.3	55.9	53.7	51.6	49.9	47.1
45.0		68.8	68.1	67.4	66.3	65.1	64.2	62.7	60.8	59.4	57.7	56.1	54.3	53.1	51.4	49.6
67.5	69.2	69.3	68.9	68.1	66.9	65.8	64.3	62.1	60.8	58.9	56.5	54.3	51.9	49.7	47.6	46.1
90.0	71.1	71.6	70.8	69.9	68.7	67.3	66.1	64.8	62.1	60.7	59.1	57.8	55.4	54.1	51.8	49.3
112.5	71.7	73.3	73.4	72.6	71.4	70.2	69.1	68.3	66.6	65.1	63.1	61.4	59.7	57.4	56.5	53.1
135.0		75.4	75.6	74.3	72.9	71.1	70.2	68.3	66.5	64.7	62.9	60.7	58.4	56.8	54.7	52.1
157.5		76.8	76.4	75.2	73.1	70.7	68.9	67.3	66.1	65.1	63.7	62.6	60.4	58.7	56.4	54.2
180.0		78.3	76.7	74.0	72.3	70.4	68.2	66.7	64.8	63.9	63.3	62.5	60.1	59.3	57.4	55.7
202.5		77.8	76.4	73.9	71.8	69.9	67.6	66.5	65.3	64.1	62.1	60.9	58.8	56.7	54.2	52.1
225.0		75.9	75.3	73.2	72.4	70.3	67.9	66.2	64.7	63.8	61.9	60.8	58.4	56.2	54.1	52.3
247.5	71.6	73.3	73.8	72.1	70.6	68.8	67.4	66.1	64.9	64.0	62.8	61.3	59.7	57.9	55.3	53.4
270.0	69.9	71.1	70.6	69.2	67.3	66.1	65.0	63.7	62.1	61.3	60.1	58.8	56.4	54.3	52.0	50.1
292.5		69.1	69.6	68.2	66.9	65.3	64.1	63.1	61.3	59.5	57.3	55.7	53.2	51.7	48.9	47.3
315.0		67.3	66.8	65.1	64.7	63.3	61.5	60.4	59.2	58.6	56.9	55.7	53.1	51.7	49.5	47.8
337.5		65.8	65.1	64.3	63.2	62.7	60.9	59.4	57.6	56.3	54.8	53.7	51.8	49.1	46.9	44.7

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

Interior Levels (dBA):	Windows-open		closed		Idle
	open	65.9	closed	63.9	1800
AMBIENT LEVEL (dBA)	Windows-open	39.5	closed	32.3	

FY73 Emission Factor Testing Program
Sound Level Testing
Decibel Contour Data Sheet

Vehicle Data

No. 021 Year 1972 Make AMMO Model HORN

Normal Idle 625 1800 rpm Idle ____________ Site S.A.

Sound Level Readings (dBA)

AMB 43.1

Distance from Center of Vehicle (feet)

Radius Line (Degs)	6	9	12	15	18	21	24	27	30	33	36	48	60	72	84	96
0.0		63.4	65.3	62.6	61.7	59.8	57.4	56.7	56.0	55.2	54.4	53.5	51.6	49.6	47.2	46.5
22.5		60.6	61.7	60.2	58.4	56.7	55.4	54.3	53.8	53.4	52.8	51.3	49.6	47.9	46.4	44.7
45.0		59.3	60.5	58.7	57.4	56.6	55.4	54.9	54.2	53.5	53.0	51.9	50.6	49.7	48.3	
67.5	57.2	59.9	59.0	58.4	57.4	56.7	55.9	55.1	54.3	53.6	52.5	51.7	50.1	49.0	48.2	
90.0	57.5	60.3	60.4	59.1	57.8	56.9	56.2	55.6	54.9	54.3	53.2	51.8	48.9			
112.5	58.4	60.3	60.8	59.8	57.9	57.1	56.6	55.9	55.2	54.7	53.3	52.1	50.6			
135.0		58.0	58.4	57.6	57.0	56.3	55.4	54.9	54.5	54.2	53.6	52.5	50.3	49.7		
157.5		55.4	57.5	56.8	55.4	54.7	54.1	53.3	52.1	50.9	49.6	48.7				
180.0		57.1	57.4	56.9	56.2	55.7	55.0	54.6	53.8	53.2	52.7	52.0	51.6	49.7	49.0	
202.5		56.1	57.3	56.5	56.0	55.4	54.8	54.2	53.5	52.5	51.6	50.3	49.4	48.7		
225.0		57.4	57.9	57.1	56.3	55.4	54.7	53.2	52.1	50.0	49.6	48.7				
247.5	57.4	59.9	59.2	58.5	57.3	56.7	55.4	54.3	53.1	52.2	51.7	50.4	49.6	48.9		
270.0	57.6	60.6	59.8	58.1	57.3	56.4	55.2	53.9	52.6	51.5	50.1	49.8	48.7			
292.5	58.4	60.7	59.8	59.0	57.9	56.7	55.1	54.2	53.5	52.4	51.0	48.9				
315.0		60.4	61.5	60.7	59.3	58.4	56.6	55.1	54.4	52.9	52.0	50.7	50.1	49.6		
337.5		63.6	64.4	62.8	60.5	58.7	56.9	56.0	55.2	54.1	53.2	52.9	51.3	50.4	49.7	

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

Interior Levels (dBA): Windows-open 52.4 closed 51.9 Idle
open ____ closed ____ 1800

AMBIENT LEVEL (dBA) Windows-open 41.8 closed 32.1

FY73 Emission Factor Testing Program
Sound Level Testing
Decibel Contour Data Sheet

Vehicle Data

No. 021 Year 1972 Make AMMO Model HORN

Normal Idle ______ 1800 rpm Idle ✓ Site S.A.

Sound Level Readings (dBA)

AMB 43.1

Distance from Center of Vehicle (feet)

Radius Line (Degs)	6	9	12	15	18	21	24	27	30	33	36	48	60	72	84	96
0.0		86.0	86.7	83.4	80.4	77.3	76.4	75.7	74.0	72.9	72.3	71.4	70.0	69.6	68.3	67.6
22.5		85.5	84.3	81.7	78.0	76.5	74.9	73.1	72.2	70.9	68.7	66.9	65.4	64.3	63.7	62.2
45.0		81.1	82.4	80.0	76.9	74.8	72.9	70.3	69.7	67.6	66.5	65.3	63.9	67.7	66.4	65.1
67.5	76.9	78.6	79.2	76.4	74.8	73.7	72.1	70.2	69.3	67.8	66.4	65.7	64.6	63.5	61.9	60.2
90.0	75.4	78.3	76.3	73.8	71.9	69.5	68.4	66.3	64.9	62.9	61.5	60.4	59.8	58.7	57.5	56.3
112.5	76.1	77.4	76.0	74.3	73.7	72.2	71.4	70.6	69.7	68.4	67.3	66.1	65.0	64.5	63.1	60.0
135.0		73.5	75.4	74.5	73.2	71.9	70.4	69.1	68.3	67.1	66.5	63.2	61.2	60.0	59.7	58.4
157.5		70.2	72.9	72.7	72.4	71.3	70.5	69.4	67.8	66.4	63.1	61.2	59.7	58.4	56.1	55.2
180.0		70.6	71.4	70.8	69.1	68.3	67.6	66.4	65.1	63.9	60.0	59.8	57.2	56.5	54.1	53.1
202.5		69.0	73.2	72.9	72.3	71.2	70.6	69.1	68.4	67.6	65.1	63.9	61.8	60.2	58.9	57.1
225.0		72.5	75.3	74.6	73.5	72.2	71.4	70.5	69.1	67.8	65.9	63.9	61.8	59.9	58.3	57.1
247.5	76.8	77.4	75.3	74.0	73.1	72.6	71.3	70.0	69.1	68.3	67.1	65.2	64.1	62.7	60.7	58.1
270.0	76.4	77.6	76.6	74.2	72.3	71.4	70.4	69.8	68.7	67.5	65.3	63.9	61.7	60.1	59.6	57.1
292.5	77.1	78.7	77.8	76.7	74.4	72.9	72.0	71.3	70.7	69.1	67.3	65.9	64.1	63.0	62.2	61.3
315.0		79.3	82.1	79.4	76.7	75.9	75.0	74.1	73.3	72.7	71.1	70.3	68.7	67.2	66.3	64.9
337.5		85.0	85.6	81.5	79.3	76.8	75.1	74.3	73.5	72.7	71.8	69.5	68.4	67.1	66.0	65.1

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

Interior Levels (dBA): Windows-open ☐ closed ☐ Idle

open 59.4 closed 58.3 1800

AMBIENT LEVEL (dBA) Windows-open 41.8 closed 32.1

FY73 Emission Factor Testing Program
Sound Level Testing
Decibel Contour Data Sheet

Vehicle Data

No. 025 Year 1968 Make OLDS Model 442

Normal Idle 780 1800 rpm Idle ______ Site S.A.

Sound Level Readings (dBA)

AMB 46.2

Distance from Center of Vehicle (feet)

Radius Line (Degs)	6	9	12	15	18	21	24	27	30	33	36	48	60	72	84	96
0.0		60.4	59.8	59.2	58.4	57.1	56.3	55.1	53.9	52.7	51.3					
22.5		53.3	57.1	53.7	54.9	54.0	53.1	52.3	50.8	49.4	46.8					
45.0		59.2	58.4	57.2	56.5	55.8	54.3	52.7	51.4	50.0						
67.5	59.3	57.9	57.1	56.3	55.4	53.9	53.1	52.7	51.4	50.6						
90.0	59.4	58.6	57.3	56.1	54.9	52.3	51.6	50.4								
112.5	58.9	57.8	56.7	55.9	54.1	52.7	51.4	50.3								
135.0		60.7	63.7	62.4	61.4	60.2	58.7	56.3	54.9	53.8	52.9	50.8				
157.5		63.8	64.2	62.6	61.3	60.0	59.3	58.1	56.8	55.1	53.4	51.8				
180.0		62.2	64.3	63.1	61.7	60.8	58.9	57.4	56.5	54.9	52.1	50.3				
202.5		63.1	63.4	61.1	60.3	59.4	58.1	56.8	54.3	53.5	52.1	50.7				
225.0		62.6	63.0	60.7	59.4	58.1	56.6	54.3	52.9	51.8	50.4					
247.5	58.5	59.9	61.1	60.4	59.8	57.3	55.9	55.0	53.7	51.9	49.9					
270.0	60.4	60.0	59.8	58.6	57.8	56.4	55.8	54.9	53.1	51.8	50.1					
292.5		59.1	61.4	60.0	58.7	57.0	55.8	54.1	53.2	51.8	50.1					
315.0		60.5	61.1	60.8	59.8	58.3	57.4	56.5	54.3	52.8	51.1	48.9				
337.5		62.5	63.4	61.9	60.3	59.2	57.8	56.1	54.7	53.2	51.9	50.1				

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

Interior Levels (dBA): Windows-open 54.8 closed 53.4 Idle

open ______ closed ______ 1800

AMBIENT LEVEL (dBA) Windows-open 41.9 closed 38.3

FY73 Emission Factor Testing Program
Sound Level Testing
Decibel Contour Data Sheet

Vehicle Data

No. 025 Year 1968 Make OLDS Model 442

Normal Idle ______ 1800 rpm Idle ✓ Site S. A.

Sound Level Readings (dBA)

AMB 46.2

Distance from Center of Vehicle (feet)

Radius Line (Degs)	6	9	12	15	18	21	24	27	30	33	36	48	60	72	84	96
0.0		74.7	76.3	74.3	73.1	72.3	71.4	70.2	69.4	68.7	66.8	64.5	61.9	59.4	57.3	55.1
22.5		72.4	74.3	72.1	71.5	70.0	69.1	67.8	66.7	65.4	64.2	62.1	60.6	58.7	56.9	55.2
45.0		70.0	71.3	70.7	68.9	67.7	66.4	65.3	64.7	63.0	62.1	60.7	58.4	56.6	55.1	53.2
67.5	67.8	69.3	69.7	69.2	68.2	67.0	65.9	63.9	62.7	61.3	60.4	58.1	56.0	54.2	52.3	51.1
90.0	66.3	69.4	69.7	68.8	67.5	65.8	64.9	64.0	62.9	61.7	60.6	58.4	56.2	54.5	52.8	50.5
112.5	65.3	68.1	68.7	68.0	66.7	65.9	64.6	63.8	63.0	61.8	60.7	59.8	59.0	57.9	56.1	54.8
135.0		67.2	69.2	67.9	66.7	65.4	64.1	62.9	62.1	61.3	60.8	58.6	56.4	54.6	52.7	51.8
157.5		70.4	70.0	67.8	65.5	64.3	62.7	62.0	61.1	60.7	59.8	57.7	55.6	53.4	51.7	49.4
180.0		68.7	70.6	68.8	65.6	64.3	62.7	61.6	60.7	59.9	59.0	57.6	55.8	54.2	52.3	50.1
202.5		67.3	67.7	66.1	65.3	64.4	63.1	62.4	61.7	60.8	59.3	57.4	55.7	53.9	52.1	50.3
225.0		64.9	67.1	66.6	65.3	64.6	63.3	62.4	61.5	60.2	59.4	57.1	55.7	53.1	51.8	49.2
247.5	65.4	67.7	66.1	66.9	65.5	65.3	64.2	61.7	60.3	59.7	58.4	55.9	53.3	51.6	49.2	47.8
270.0	65.7	67.9	67.5	66.8	65.1	64.2	63.6	61.9	60.5	59.1	58.3	55.7	53.1	51.5	49.3	47.2
292.5		67.7	69.6	69.9	68.4	67.3	66.1	65.1	64.3	63.1	62.3	60.3	58.2	56.4	54.1	51.8
315.0		69.6	71.9	70.6	68.0	66.7	65.6	64.2	62.9	61.7	60.5	57.4	55.9	52.9	50.2	47.8
337.5		72.3	74.1	71.9	69.5	68.0	67.1	66.2	65.1	64.4	63.1	61.4	59.4	57.2	55.4	53.2

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

Interior Levels (dBA): Windows-open ☐ closed ☐ Idle

open 61.8 closed 59.9 1800

AMBIENT LEVEL (dBA) Windows-open 41.9 closed 38.3

FY73 Emission Factor Testing Program
Sound Level Testing
Decibel Contour Data Sheet

Vehicle Data

No. 077 Year 1974 Make CHEV Model VEGA

Normal Idle 620 1800 rpm Idle ________ Site S.A.

Sound Level Readings (dBA)

AMB 46.2

Distance from Center of Vehicle (feet)

Radius Line (Degs)	6	9	12	15	18	21	24	27	30	33	36	48	60	72	84	96
0.0		64.4	64.6	63.2	61.3	60.1	58.4	57.4	56.7	56.2	55.4	54.1	52.4	51.3	49.8	48.2
22.5		64.2	64.8	63.3	61.2	60.5	59.6	58.9	57.7	56.7	56.2	54.0	52.8	51.5	50.1	49.2
45.0	63.1	62.7	62.2	61.2	60.6	59.8	58.6	57.4	56.7	56.2	55.8	54.5	53.6	52.0	50.7	49.8
67.5	62.5	61.9	60.9	59.8	58.6	57.7	56.6	56.0	55.4	54.9	54.3	53.5	52.3	50.7	49.4	47.8
90.0	62.6	61.5	59.8	58.7	57.4	56.9	55.7	55.1	54.4	54.0	53.5	52.6	52.0	50.9	49.1	47.8
112.5	62.4	61.3	59.6	58.5	57.8	57.1	56.3	55.5	55.2	54.6	53.5	52.8	51.1	50.4	49.5	48.2
135.0		59.6	59.3	58.8	57.5	57.0	56.2	55.4	54.9	54.3	53.8	52.6	51.9	49.7	48.5	48.1
157.5		56.2	56.7	55.8	55.2	54.9	54.4	53.5	53.1	52.8	52.3	51.4	50.5	49.3	48.7	47.6
180.0		56.4	56.9	56.3	55.4	54.9	54.5	53.6	53.2	52.5	52.1	50.8	50.6	49.2	48.7	47.6
202.5		58.3	58.9	58.4	57.4	56.8	56.6	55.7	55.2	54.4	54.0	52.8	52.7	51.2	50.6	49.7
225.0		61.3	60.4	59.7	58.1	57.5	56.9	56.3	55.4	55.0	54.7	53.8	52.2	51.3	50.2	49.8
247.5	62.5	61.3	60.2	59.2	58.1	57.4	56.8	56.2	55.4	55.0	54.6	53.4	51.8	50.6	49.6	49.1
270.0	62.3	61.4	59.9	58.7	58.1	57.3	56.7	56.1	55.6	55.0	54.4	52.9	51.3	49.7	49.2	48.5
292.5	62.9	62.1	61.4	60.7	59.3	58.1	57.5	56.9	56.1	55.2	54.5	53.0	51.7	50.4	49.6	48.7
315.0	63.4	62.7	63.2	62.1	60.5	58.9	58.3	57.5	56.7	55.2	54.8	53.0	52.1	51.4	49.9	49.1
337.5		64.3	63.5	61.4	60.1	58.4	57.7	56.9	56.3	55.8	55.1	54.3	53.5	52.4	50.6	49.4

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

Interior Levels (dBA): Windows-open 55.1 closed 53.6 Idle

open ____ closed ____ 1800

AMBIENT LEVEL (dBA) Windows-open 45.8 closed 32.7

FY73 Emission Factor Testing Program
Sound Level Testing
Decibel Contour Data Sheet

Vehicle Data

No. 077 Year 1974 Make CHEV Model VEGA

Normal Idle ____ 1800 rpm Idle ✓ Site S.A.

Sound Level Readings (dBA)

AMB 46.2

Distance from Center of Vehicle (feet)

Radius Line (Degs)	6	9	12	15	18	21	24	27	30	33	36	48	60	72	84	96
0.0		77.3	74.2	72.1	70.6	69.2	68.3	67.1	66.1	65.3	64.6	62.4	61.0	59.8	57.5	56.8
22.5		75.7	74.2	72.3	71.0	68.7	67.2	66.3	65.1	64.5	64.0	61.8	60.5	59.4	57.2	56.5
45.0	71.8	72.5	72.7	71.1	68.9	68.0	66.4	65.3	64.6	63.9	63.1	61.0	59.6	58.4	56.1	55.4
67.5	70.4	71.6	70.9	69.6	68.1	66.9	65.4	64.6	63.4	62.8	62.1	59.8	58.3	57.0	54.6	53.8
90.0	69.7	70.8	68.6	66.3	64.9	63.8	63.0	62.0	61.3	60.5	59.8	57.7	56.4	55.3	53.1	52.3
112.5	67.5	68.4	67.6	66.3	65.7	65.1	64.3	63.1	62.4	61.8	61.1	58.9	57.5	56.3	54.0	53.3
135.0		67.1	67.6	67.1	66.4	64.5	63.8	63.2	62.6	62.0	61.5	59.2	57.7	56.4	54.0	53.2
157.5		63.9	64.6	64.0	63.4	62.8	62.3	61.6	61.2	60.6	60.1	58.0	56.7	55.6	53.4	52.8
180.0		64.3	65.2	63.8	62.9	62.1	61.0	60.1	59.7	59.2	58.3	56.0	54.5	53.2	50.8	50.0
202.5		64.9	65.4	65.2	64.5	63.8	63.0	62.7	61.5	60.9	60.0	57.8	56.4	55.2	52.9	52.2
225.0		67.2	68.6	67.3	66.8	65.6	64.9	63.6	63.1	62.4	61.6	59.5	58.2	57.1	54.9	54.3
247.5	68.3	72.1	70.3	68.4	66.8	65.7	64.7	64.0	63.3	62.4	61.8	59.6	58.2	57.0	54.7	54.0
270.0	68.2	72.0	69.9	67.6	65.9	65.0	63.7	63.0	62.6	62.0	61.4	59.3	58.0	56.9	54.7	54.1
292.5	71.8	72.7	71.5	69.1	67.4	65.3	64.1	63.1	62.3	61.5	60.7	58.4	56.9	55.6	53.2	52.4
315.0		74.2	73.9	71.5	68.6	67.1	66.0	65.3	63.7	62.9	61.4	59.2	57.8	56.6	54.3	53.6
337.5		77.1	76.7	73.9	71.0	68.7	67.1	66.0	65.2	64.3	63.4	61.1	59.6	58.3	55.9	55.1

XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX

Interior Levels (dBA): Windows-open ☐ closed ☐ Idle

open 66.7 closed 64.3 1800

AMBIENT LEVEL (dBA) Windows-open 45.8 closed 32.7

APPENDIX J

TEST FUEL INSPECTION REPORTS

SITE	TEST NOS. (INCLUSIVE)	RVP	H/C	IBP	5%	10%	15%	20%	30%	40%	50%	90%	FBP
Denver	D001-D073	9.3	2.20	83	115	131	140	155	176	199	224	320	321
	D074-D114	9.1	2.10	86	121	133	139	160	186	205	250	360	362
	D115-D259 (except evap)	8.6	2.00	88	124	136	150	155	183	206	235	369	370
Houston	H001-H025	11.0	1.74	83	119	133	144	157	184	208	230	323	324
	H026-H090	10.4	1.72	86	123	139	150	163	186	216	241	359	360
	H091-H202	10.0	1.78	87	120	136	148	162	187	214	240	370	370
Detroit	M001-M086	9.5	1.77	87	122	137	149	160	183	210	235	370	370
	M087-M190	9.6	1.83	88	124	137	149	158	183	208	232	368	372